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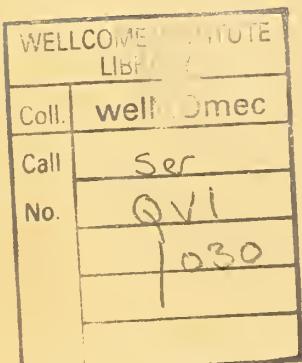
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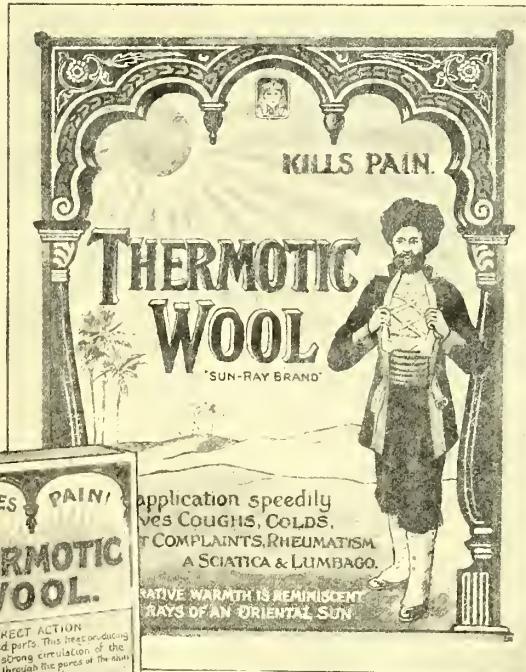
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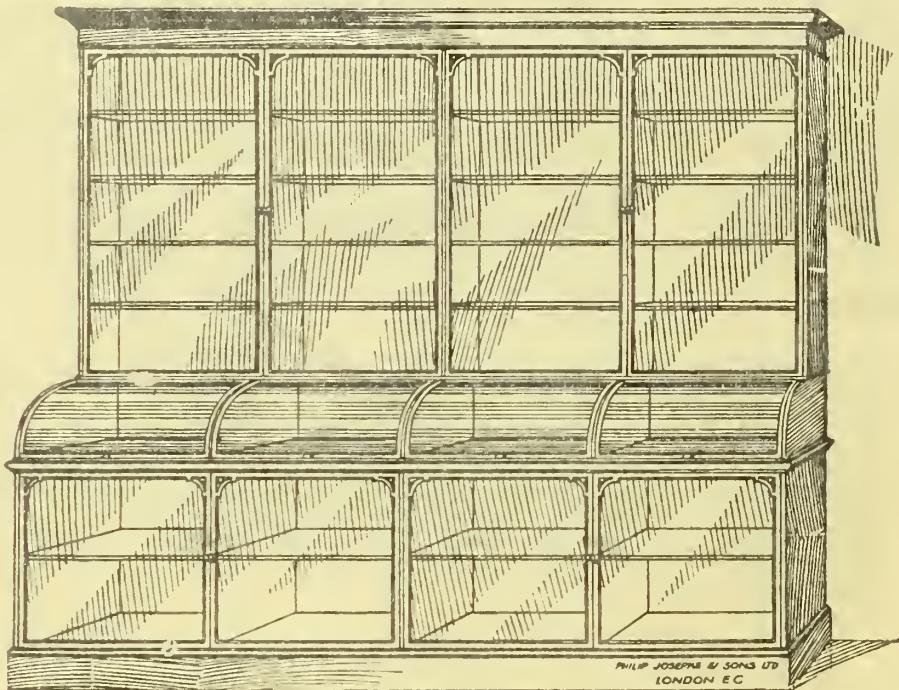
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Will you please repeat at once our last order for "NUPINES" we are quite out of stock.

I may say that during the 10 days we have been using your window display we have sold over 56 lbs. which, considering the neighbourhood of this branch is highly satisfactory.

I am sure if your customers could see, as I did on a recent visit to your Works, the ideal conditions under which your preparations are produced, they would have the greatest confidence in recommending them.

It is without doubt the cleanest and most orderly Factory I have ever visited.

Yours faithfully,

FOR REINHARDT & SONS, LIMITED.

Messrs. W.B.Cartwright & Co.,

Wm W Fletcher MANAGING DIRECTOR

R A W D O N.

R. CALVERT BROWN, 3 Westborough, Scarborough, also sends the following:—

"Would you kindly send us another cwt. of Autopine Pastilles as before. Business generally is rather quiet, therefore a line like this is proving a veritable God-send as an attraction. Please send as quickly as possible."

" THOMAS RIDLEY & SON, Pharmacists,
" 9 English Street, Carlisle.
Nov. 27, 1914.

" Dear Sirs,—Your Window Show of Nupines has been a marvellous success. We have, as you know, sold 2 cwt. in the last month. They not only pull in new trade, but are sure repeaters, thanks to the talking Showcards and other window devices you send.—Yours truly,

THOS. RIDLEY & SON."

TESTIMONIALS RECEIVED BY

W. B. CARTWRIGHT, LTD., MAKERS OF QUICK-SELLING
SPECIALTIES FOR THE PHARMACY, RAWDON, N.R. LEEDS.

The following are Typical Examples of the
PRODUCTS MANUFACTURED
 IN
OUR MODEL LABORATORIES

We offer these at Strictly Competitive Rates

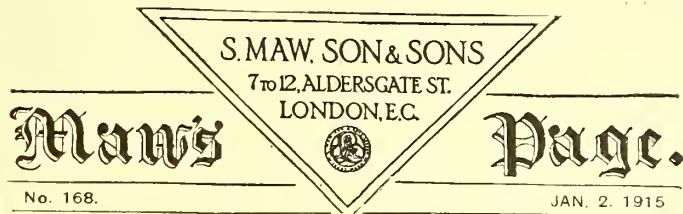
EUONYMIN	HAMAMELIN	
HYDRASTIN	IRIDIN	LEPTANDRIN
ALOIN	CAFFEINE	CHRYSAROBIN
JALAP	AND SCAMMONY RESINS	
PODOPHYLLIN		
GINGERIN & CAPSICIN		
BISMUTH SALTS		
SALTS OF ALL THE METALS & NON-METALS		
ACETANILIDUM		
HEXAMETHYLENETETRAMINE		
(HEXAMINE P.B. 1914)		
TERPENELESS OILS, ANETHOL, &c.		
ALKALOIDS		
TABLETS AND PILLS		
OF THE MOST ELEGANT FINISH AND ACCURATE DOSAGE		

BURGOYNE, BURBIDGES & CO.

All Communications should be addressed to
EAST HAM - - LONDON, E.

DURING THE NEXT FEW WEEKS "MAW'S PAGE" WILL BE DEVOTED TO OUR "PAREX" (Regd.) SERIES OF TOILET AND SURGICAL PREPARATIONS. PHARMACISTS SHOULD FOLLOW THESE ISSUES AND KEEP IN TOUCH WITH THE GREATEST BRANDED LINE SUCCESSES OF 1914.

OUR
NEW
EMERY
BOARDS
(See below).



OPTICIANS'
"OWN
NAME"
BOOKLETS
(See below).

GRAMMES

WE cannot allow the First of January to pass by without wishing all our Customers, and Readers of "Maw's Page," a very Prosperous New Year.

* * *

THE following Manicure requisites are proving very popular: Our new superior flexible Emery Boards, mounted on showards in twelve bundles of six pieces; also real Orange Wood Sticks, similarly put up. Either line, 3/3 per card.

* * *

TOWARDS the close of last year we had great difficulty in supplying sufficient quantities of our new, All-British, Effective Flasks, so great has been the demand. Now we have a good selection to meet your requirements. Made in pint size only these flasks are supplied from 3/9 to 7 6 each, and in dozen lots from 42/- to 84/- A strong feature of the All-British "Effective" Campaign is the excellently produced advertising matter. This includes a set of showcards and leaflets for counter distribution. There is a big market for a British-made vacuum flask, especially when of "Effective" quality.

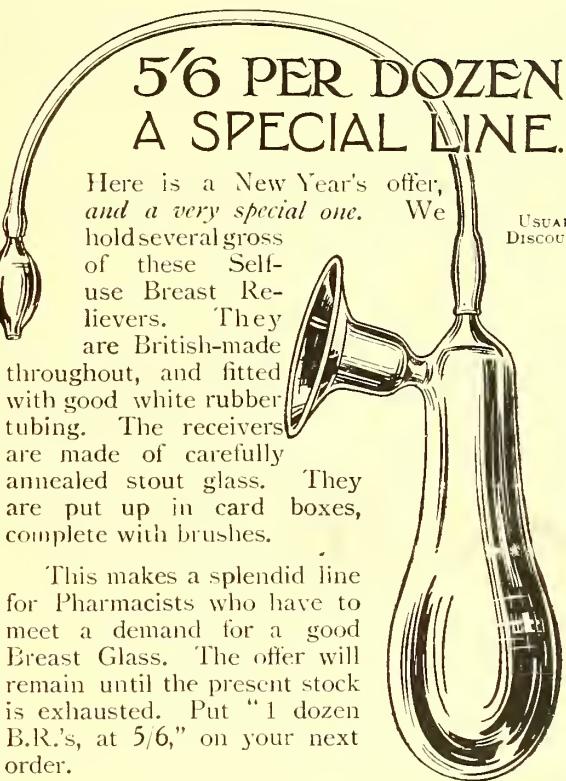
* * *

THE postponement of our "Parex" Pageant from August until the present moment illustrates in a striking manner the policy behind "Maw's Page." We have always endeavoured to make this weekly announcement helpful to Pharmacists, and by means of illustrations and letterpress to introduce lines of special interest adaptable to the needs of the moment.

Consequently, when war was declared, we knew that our customers would turn to these columns for topical lines and suggestions for creating business during those abnormal times.

The temporary withdrawal of the "Parex" Pageant from our issues was one more proof that "Maw's Page" is the page for all Pharmacists who follow the trend of business requirements.

The "Parex" Pageant commences next week.



Here is a New Year's offer,
and a very special one. We

hold several gross
of these Self-
use Breast Re-
lievers. They
are British-made
throughout, and fitted
with good white rubber
tubing. The receivers
are made of carefully
annealed stout glass. They
are put up in card boxes,
complete with brushes.

This makes a splendid line
for Pharmacists who have to
meet a demand for a good
Breast Glass. The offer will
remain until the present stock
is exhausted. Put "1 dozen
B.R.'s, at 5/6," on your next
order.

OUR OPTICAL CORNER.

The darkened streets of London and provincial towns, and the number of young men rejected by the War Office on account of defective sight, together offer two good reasons why Opticians should advertise.

PUBLICITY AIDS.
We suggest that one of the best methods of publicity is by means of booklets. Hitherto the Optician who has wished to distribute, say, a thousand copies has found the initial cost of printing prohibitive. The only alternative was a "stock" production; often badly produced literature of obvious origin.

"OWN NAME" BOOKLETS.
Advertising matter, to ensure the best results, should give the impression that it is the original production of the advertiser. We have made arrangements to supply a series of "Own Name" booklets. They are written with a scientific touch, yet sufficiently resting for the layman to peruse from the first word to the last. Attractively printed in modern type on good art paper, they will appeal to all Opticians who appreciate the value of high-class advertising. To prevent overlapping, we reserve the supply to one customer in a district. Prices as follows: 19/6 for one thousand; 17/- or two; 14/6 for three; 13/- for five. Samples willingly sent on request.



SANTORA, THE NEW SPUTUM FLASK



This requisite is put up in a particularly pleasing style in neat dark green box with distinctive label. The "Santora" is a blue glass Sputum Flask, fitted with an aluminium cap and leak-proof rubber disc. Concave in shape, it is suitable for pocket use.

PRICE 3/9 DOZEN.

New Year 1915

During the forthcoming year, as in the past, the feature in Pharmacy & the Drug Trade will be

EVANS AT THE FRONT

The present International trouble has created new opportunities for serving Pharmacy and Chemical Industry. These opportunities are not being missed by us, and the result will be

Increased Prosperity for all

SEE PP. 143, 237, 251, 269, 306 "C. & D." DIARY, 1915

**EVANS SONS LESCHER & WEBB
(LIMITED)**

LIVERPOOL & LONDON.

J.C. GARNFIELD & SONS

LIMITED

TEL. NO: GOI
2 LINES.

TELEGRAMS:
"CHEMICALS"

MANUFACTURING CHEMISTS
WHOLESALE & EXPORT DRUGGISTS
GADSBYS WORKS PRINCES ST.

ESTAB-
LISHED
1786.

STOCKPORT

If your galenicals are right you have the confidence of the medical profession and of the general public. We can supply the right galenicals and so ensure

*MUTUAL PROSPERITY
IN 1915*



INF. GENT. CO. CONC.
SYR. HYPOPHOS. CO.

ETC. ETC.

EXT. ERGOTAE LIQ.
EMULSIO OL. MORRH.

(IN BULK)

Laxative
Tablets.

Medicated
Pastilles.

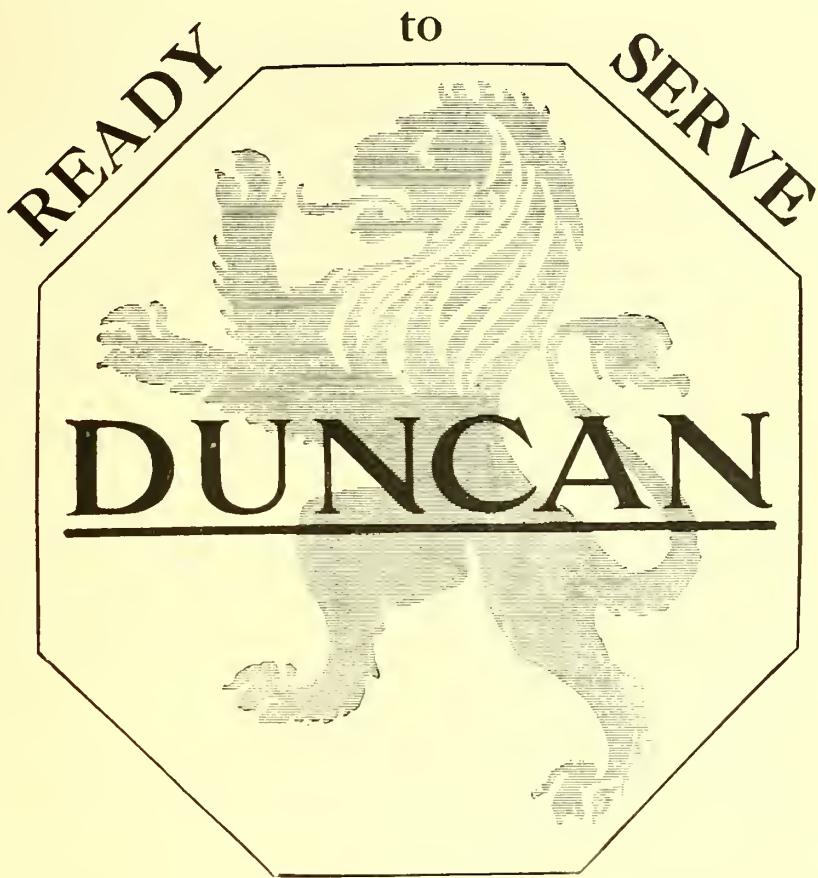
New Year 1915.

*Our resources are at
the disposal of the Drug
Trade to assist them to
increased Prosperity in
the forthcoming
Year.*

Menthells.

Plasters.

BLYTON, ASTLEY & CO.
Eagle Laboratories,
Manchester.



*May the New Year bring
peace and prosperity to all
our friends in the Drug Trade.*

*Duncan, Flockhart & Co.,
Edinburgh & London.*

**Chloroform, Ethers, Ethyl-Chloride, Pharmaceutical Preparations,
Organic-Therapeutical Preparations.**

See pages, 241-243, "C. & D." Diary, 1915.





More than ever

will it be necessary in the forthcoming year to exercise care and judgment in buying and selling.

In order to do this best, do it the "UCAL" way—the way to

SUCCESS AND PROSPERITY.

UNITED CHEMISTS' ASSOCIATION, LTD.

President:

W. T. HIND, M.P.S., Clarendon Park, Leicester.

Directors:

J. GILBERT JACKSON, M.P.S., Sheffield. (*Chairman*)
 C. C. H. CADGE, M.P.S., Bingham, Notts. (*Vice-Chairman*)
 A. E. BOLSHAW, M.P.S., Hastings.
 G. F. BUSHBY, M.P.S., Manchester
 F. CHERRY, M.P.S., Walton-on-Thames
 G. W. EVANS, M.P.S., Hammersmith, London, W
 HAROLD MILLER, M.P.S., Cheltenham. (*Managing Director*)

Secretary and Registered Offices:

E. MANNING KEER, F.A.A., 125 Norfolk Street,
 Sheffield.

Laboratories and Works:

Priory Court, Cheltenham.

T & H. SMITH LTD



MORPHINE
AND
SALTS

Codeine
and
Salts

Caffeine

Strychnine

Capsicin

Gingerin

Salicin

Theobromine

New Year 1915.

*Wishing continued
Progress and
Prosperity to all
in the Drug and
Chemical Trades
in the forthcoming
New Year.*

CHLOROFORM
PURE,
B.P.

Cantharidin

Emetine

Ergotin

Jalap
Resin

Scammony
Resin

Aloin

Podophyllin

GRAND PRIX,
PARIS, 1900.

EDINBURGH
BLANDFIELD WORKS

GRAND PRIX,
BRUSSELS, 1910.

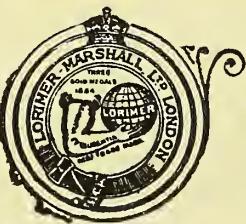
• LONDON
• 22 CITY ROAD E.C.

GRAND PRIX,
LONDON, 1908.

• GLASGOW
• 37 WASHINGTON ST

THIS IS THE
TOILET ARTICLES

MARK FOR
AND PACKED GOODS



A Series of Successes such
as are produced by
the Lorimer-Marshall
products means
Continued Prosperity
in the New Year.



*The Seasons' Greetings
to all our Friends*



LORIMER-MARSHALL, LTD.

Offices & Showrooms : 12 Tower Hill, London, E.C.
Works : Coldblow, Hatcham, London, S.E.

HIGHEST HONOURS AT INTERNATIONAL EXHIBITIONS.

TEN GRANDS PRIX & FIVE GOLD MEDALS

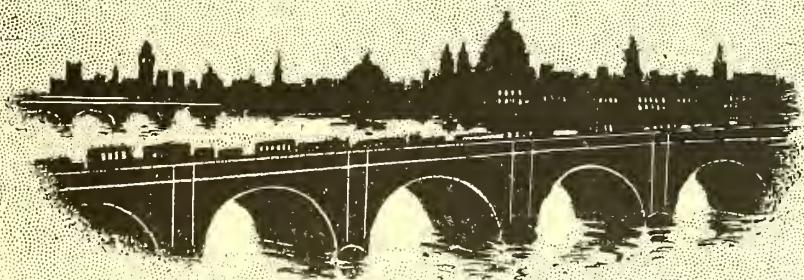
BY
APPOINTMENT

TO
H.M. THE KING



Cook's

SOAP SPECIALISTS

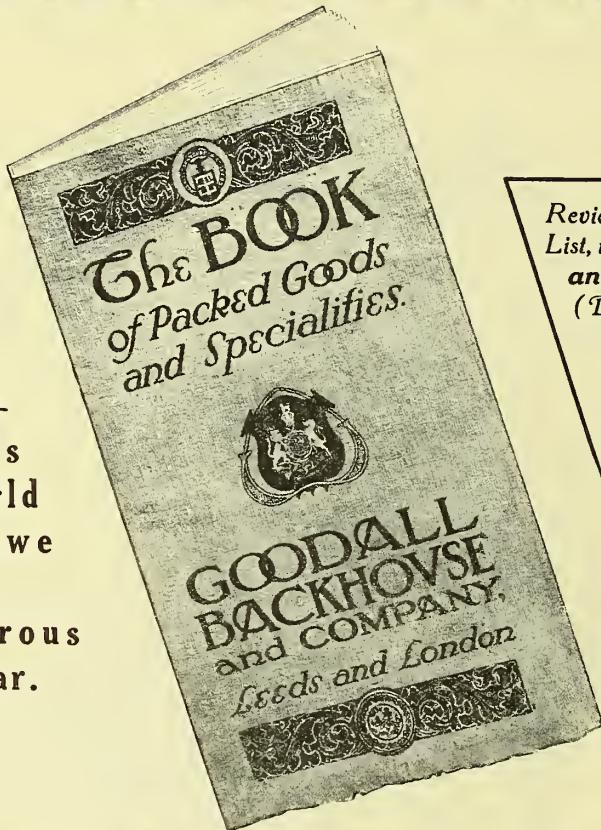


LONDON

*Best wishes for a Brighter and more
Prosperous New Year to all Chemists.*

WE ARE AT YOUR SERVICE FOR "OWN NAME" AND ALL KINDS OF PROFIT-BRINGING SOAPS, &c.

To our friends and customers the World over, we wish a Prosperous New Year.



Reviewing this New List, the "Chemist and Druggist" (Dec. 12, 1914), said :—

"The List is well worth studying—our subscribers should send a postcard request for it."

MORE PROFIT for 1915!

THE more strenuous competition, the higher costs of stock, and the serious reduction of turnover which accompany War, make it plain that you *must* earn unusually high profits in 1915 if your business is to "win through" unscathed.

Your problem is therefore simply—

How can I secure the essential high profits on high-quality goods sold at competitive retail prices?—and the purpose of this List is to give you efficient help in the finding of an answer. In its pages, Profits of **50%**, **60%**, and even **70%** are common.

Send a postcard for the List to-day to

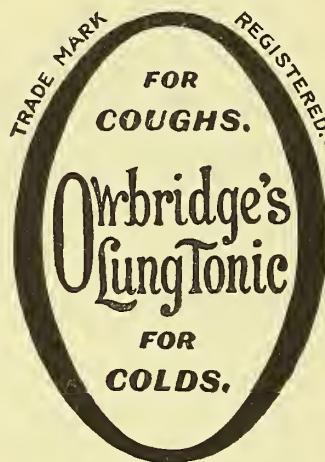
**GOODALL, BACKHOUSE & CO.,
LEEDS.**

1845—1915.

William Ransom & Son, Ltd.,
Manufacturing Pharmaceutical Chemists,
send their best wishes
for a Prosperous New Year
to all their friends in the
Wholesale & Export Trades.

Hitchin :

December 31, 1914.



There is only one
OWBRIDGE'S LUNG TONIC
and it bears this Registered Trade Mark.

Xmas 1914

New Year 1915

If you confine your Cough Mixture sales to Owbridge's, it will mean satisfaction to your customer and profit to yourself.

Let us help you with our ingenious advertising devices.



W. T. OWBRIDGE, LTD., HULL.

Motto for 1915.
"Keep Cheerful!"

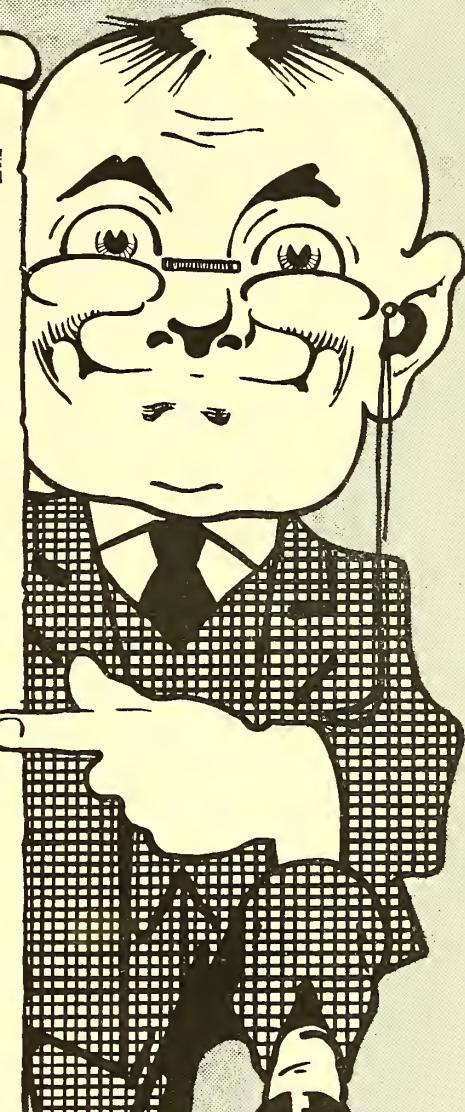
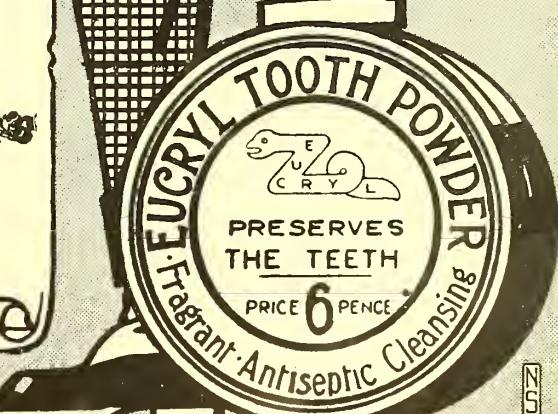
It is not very easy sometimes with depressing news and slow trade, but you can always sell

EUCRYL TOOTH POWDER

Eucryl sells quickly because it is well-known to the public by name and reputation. Its quality is high. Its flavour is different. Customers always come back for more. And on each sale—firsts and repeats—you make 100 per cent. guaranteed profit on cost.

It will assist you to that prosperity and happiness we wish for all Chemists.

EUCRYL LIMITED,
61-63 Lant Street, Southwark,
LONDON, S.E.





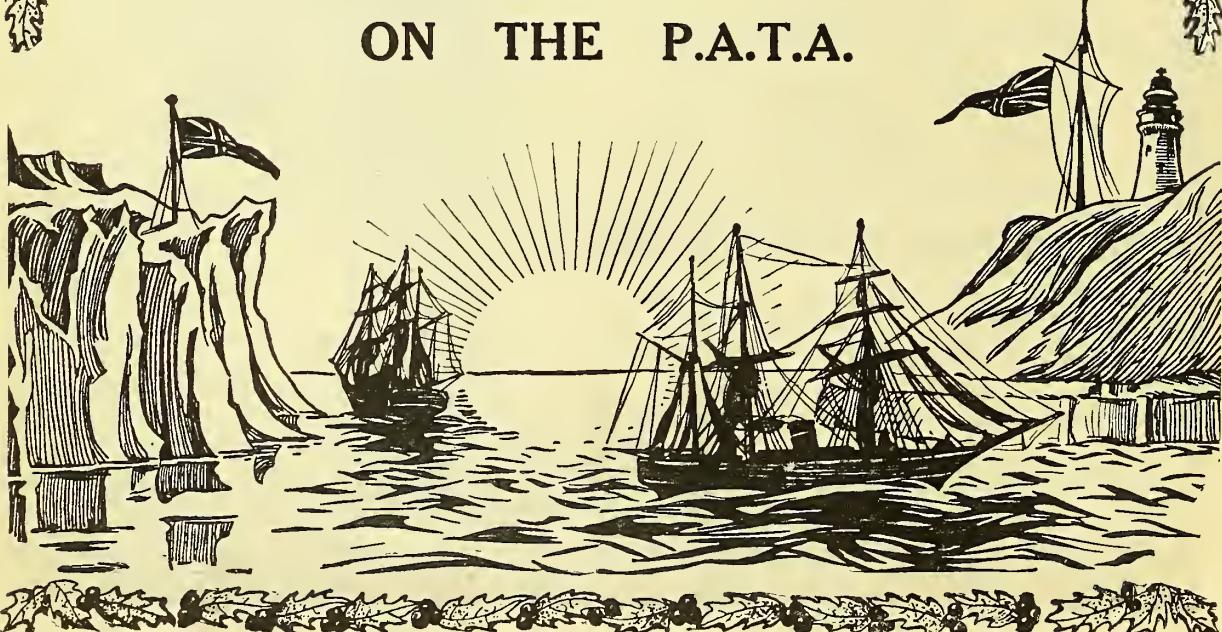
New Year 1915.

A Genuine British

remedy will sell always, but particularly so in these patriotic times. Stock Burgess's Specialities and ensure the Happiness and Prosperity we desire for all.

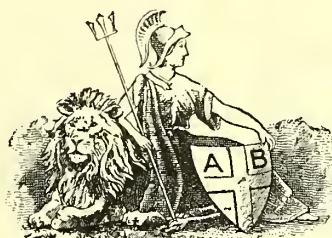
E. Burgess, 59 Gray's Inn Road, London, W.C.

ON THE P.A.T.A.



TRADE

MARK.



CONTRACTORS TO HIS MAJESTY'S GOVERNMENT.

SURGICAL
DRESSINGSCHEMISTS'
SUNDRIESPROMPT
DELIVERYUNIFORM
QUALITY

1915

*Seasonable Greeting
and Best Wishes for
a New Year of
greater Prosperity*

ARTHUR BERTON, LTD.

(Formerly Arthur Berliner)

Registered Office & Warehouse ... 15 & 17 WORSHIP ST., LONDON, E.C.

Works and Factories :

Ben Mills } BURY,
Waterford Mills } LANCS.

2a Tabernacle St., LONDON.

Telegrams :
"RENILREB LONDON."Telephones :
LONDON WALL - - 507.
CITY - - - - 998.

Westminster College

*Hearty Greetings
and Best Wishes
to all Westminster
Students, past and
present, throughout
the World.*



THE **STRAIGHT ROAD**

*for success in
Pharmaceutical Studies
is here shown.*

*Any student who
“WILLS” it can
become an M.P.S.*

Bloomsbury Square

SEE "C. & D." DIARY, 1915, PAGE 68.

Westminster College of Pharmacy,

PRINCIPALS: G. S. V. WILLS, Ph.C.
P. H. WOODNOTH, M.P.S.

402 Clapham Road, London, S.W.

THE IDEAL
TONIC
VITAGEN
NERVE
FOOD

ACETOPIRIN
identical with
ASPIRIN.
Bottles of
25's and 100's.

Tins
same weights
as Sanatogen
VITAGEN
7/-, 11/-, 18/-, 30/-
dozen.

FORMALIN-
MINTS
Bottles of 50.

A Successful Campaign

can be conducted throughout
the forthcoming year by
selling these

Lorimer Productions

'They rout the enemy,
bring satisfaction and
profit to the seller and
induce

Prosperity in 1915.

*Write to John Lorimer,
Balfour House, 119 Finsbury Pavement, London, E.C.*

Starch free
INFANTS'
FOOD
A Soluble
Maltose food.

ALL =
BRITISH
LYSOL

In bottles with Measures.

4	8	16 oz.	1 gall.
4/3	7/-	12/6 doz.	7/- each

MALT
AND MILK
POWDER
and
TABLETS

EAU DE BOLOGNE

When the City of Cologne belongs
either to France or Belgium this per-
fume may again revert to its old name
of "Eau de Cologne," meanwhile
patriotic Britons will for many rea-
sons leave ALL perfumes bearing

EAU DE BOLOGNE

the name of Cologne severely alone.
This City has led in virulent attacks
on ENGLAND and everything
BRITISH. Advertising its name
and chief trade is but playing into
the enemy's hands.

Only terms: Cash with order ex Warehouse.

SUTTLEY & SILVERLOCK, Ltd.



Sincerely wish their many friends
The Compliments of the Season,
And express the hope that
Peace, Health and Good Fortune
May wait upon each one during
The days of Nineteen Hundred and Fifteen.

BLACKFRIARS ROAD, LONDON.

Success

Full, complete and satisfactory is the outcome of the use of a tin of Rodine Rat Poison, and a year of like Success and Good Trade and Prosperity in 1915 is the hearty wish to all Agents and Chemist friends of

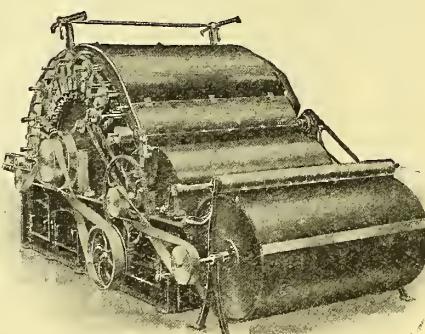
Thomas Harley Manufacturing
Chemist, PERTH, Scotland

Export Agents :—
Tozer, Kemsley & Fisher,
Ltd.,
84 Fenchurch St., London,
E.C.



Absorbent Cotton Wool (SURGICAL WADDING).

Complete plants supplied for manufacture of above.



CARDING ENGINE for Absorbent Cotton Wool.

WM. TATHAM, Ltd.
Rochdale, England. (3)

Prescribed for Members of the Royal Family.

SUPPLIED TO H.M. QUEEN MARY'S ROYAL NAVAL HOSPITAL,
THE BRITISH RED CROSS SOCIETY'S HOSPITALS, Etc.

Over a quarter of a century
of uninterrupted success as
a specialised preparation.

Unsurpassable reputation for
genuineness. Never claims to
do more than it can accomplish.

KUTNOW'S POWDER

For Liver, Kidneys & Bowels.

THE FAMOUS BRITISH REMEDY MADE IN ENGLAND ONLY

ESTABLISHED OVER A QUARTER OF A CENTURY

It is on the P.A.T.A.

It is well advertised

It is very popular

It is a good article

It is never dead stock

It yields a good profit

It satisfies everybody

ORDER AT ONCE FROM
YOUR WHOLESALE HOUSE



The Doctors prescribe it
The Nurses recommend it
The Public appreciate it
The Customer comes again
The demand is constant
The sales are increasing
The trade is booming

WINDOW SHOWS ATTRACT
REMUNERATIVE BUSINESS

IMPORTANT NOTICE

Hospital War Service

FREE OF CHARGE

DOCTORS, NURSES & HOSPITALS

are invited to apply at once for special Physicians' Sample Bottles of Kutnow's Powder, for the use of the sick and wounded both at the front and at home. All applications will be dealt with promptly and supplies forwarded immediately, carriage paid. Applications to be made by letter, marked

"HOSPITAL WAR SERVICE,"
and addressed to

Messrs. S. KUTNOW & Co., Ltd.

41 Farringdon Road, London, E.C.

PERSONAL NOTICE

Showcards & Dummies

SEND THIS COUPON.

To S. KUTNOW & CO., Ltd.,
41 Farringdon Road, London, E.C.

Please send me Showcards and Dummies, carriage paid.

NAME.....

ADDRESS

..... "Chemist & Druggist" Jan. 2nd, 1915.

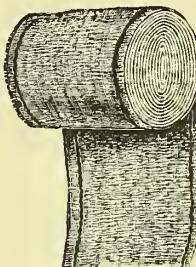
Fill in, cut out, and post in open envelope, affix ½d. stamp.

S. KUTNOW & CO., LTD. Sole Proprietors,
41 Farringdon Road, London, E.C.

CREPE BANDAGES.

**BRITISH
MAKE.**

**LIGHT AND
COMFORTABLE
TO WEAR.**



**ELASTIC,
BUT CONTAINS
NO RUBBER.**

No. 1331.—The "Saffron" Crepe Bandages: fast edges, 5½ yards long when stretched out—	Width	2 in.	2½ in.	3 in.	3½ in.	4 in.
Medium substance for ordinary wear per doz. 6/3	7/3	8/3	9/3	10/3		
Stout .. for hard 8/- 9/6 11/3 13/- 14/6						

Full directions for use with each Bandage.
Cotton Elastic Web Bandage ... per doz. yards, 2 in., 3 6; 2½ in., 4 6; 3 in., 5 6.
Leg Bandage, 3 yards long, fitted with tapes, ready for use, each 1 6.

The "Empire" Elastic Hosiery.

Cotton Elastic, ordinary quality, for hard wear, sizes 1 to 8 per pair 3/6	Knee Caps. 2/9	Anklets. 2/9	Leggings. 3/-
" " " " 11 to 8 ... per doz. pairs 39/-	30/-	30/-	33/-

5% discount allowed for prompt cash off above prices. Carriage paid on orders of £2 and upwards.

We are the right House for Catheters, Enemas, Elastic Hosiery, Hot Water Bottles, Injection Syringes, Pessaries, Sponge Bags, Trusses, Water Beds, Water and Air Cushions, Waterproof Sheetings, and every description of Rubber Goods.

ILLUSTRATED PRICE LIST POST FREE. OUR GOODS ARE RIGHT. MONEY BACK IF NOT SATISFIED.

BURGE, WARREN & RIDGLEY, LTD.,
91 & 92 GREAT SAFFRON HILL, LONDON, E.C.

**ALL CHEMISTS
SHOULD STOCK**

ABDINE

THE GOLD MEDAL FRUIT DRINK.

Quick Seller. Big Profits. Quarter of a Century's Reputation.
"ABDINE" is the most popular Health Drink. Superior to all Mineral Waters. Sold in 1d. Packets, and Boxes of 13 Packets at 1/- Order through your Wholesale Drug House.

D. M'GLASHAN, M.P.S., 12 West End Place, EDINBURGH.

Wholesale Prices on Application.

INDEX and BUYERS' GUIDE

See pages 5 to 7.

Near the British Museum.

KINGSLEY HOTEL

HART STREET, BLOOMSBURY SQUARE, LONDON.

Opposite the British Museum.

THACKERAY HOTEL

GREAT RUSSELL STREET, LONDON.

These well-appointed and commodious TEMPERANCE HOTELS have Passenger Lifts, Bath Rooms on every floor, Lounges and spacious Dining, Drawing, Writing, Reading, Billiard and Smoking Rooms. Perfect Sanitation. Fireproof Floors. Telephones. Night Porters. Bedroom, Attendance, and Table d'Hôte Breakfast, single, from 5/6 to 7/6; with Table d'Hôte Dinner, from 8/6. Full Tariff and Testimonials on application.

TELEGRAPHIC ADDRESSES: Kinsley Hotel, Thackeray Hotel, "Bookcraft London," "Thackeray London." Telephones: Regent 2083, Regent 2041.

**LABELS
FOR
BRITISH
EAU DE COLOGNE**

LABEL YOUR OWN, AND
SELL THE HOME PRODUCT.

Various Samples from

JAMES TOWNSEND & SONS,
Label Printers,
EXETER & LONDON.

ALL BRITISH.

Order a line of the wonderful new food-beverage

PLASMON OAT-COCOA

to retail at **1/4** per lb. (**4½d.** per
 $\frac{1}{4}$ lb. tin) equal to 3 cups a **1d.**

NOTE THE LIBERAL PROFITS TO THE TRADE—3d. on each lb. tin—
 $\frac{3}{4}d.$ on each $\frac{1}{4}$ -lb. tin exclusive of our usual discounts.

"LANCET" Report, Oct. 24, 1914.—"Plasmon Oat-Cocoa shows a careful incorporation of the constituents indicated, and when prepared according to instructions gives a very palatable and highly nutritious food. In particular it is reinforced with the tissue-building material of milk. According to our analysis it contains just upon 20 per cent. of milk protein. In addition, there is 15.60 per cent. of fat present derived chiefly from cocoa. The moisture amounted to 6.50 per cent. and the mineral matters to 4.80 per cent. In these last there was an abundance of phosphates. It is a wholesome, sustaining food."

PLASMON CHOCOLATE is supplied as an Emergency Ration to the **BRITISH TROOPS.**

PLASMON, LTD. FARRINGDON ST., LONDON, E.C.

THE ONLY BRITISH-MADE

Prescribed by high medical authority.

DIABETIC BREAD
 WHICH IT
PAYS CHEMISTS TO HANDLE
 is ENERGEN (Regd.) GLUTEN BREAD in SEALED BOXES.

SAMPLES and TRADE TERMS from SOLE MAKERS :
 THERAPEUTIC FOODS CO., 19 BEDFORD CHAMBERS, COVENT GARDEN, LONDON, W.C.

PRICES PROTECTED.

Dr. Allinson's Food Preparations.

Food for Babies, Prepared Barley, Brunak, Power, N.F. Cocoa, Biscuits, Soup, Nutbutter (Walnut Brand), Wholemeal, &c.

NOTICE TO THE TRADE.

We issue a list of WHOLESALE HOUSES who keep above in stock; if for any reason you have difficulty in obtaining supplies, please send postcard direct to us, and a list will be sent to you by return. See trade mark on all our goods: "T. R. ALLINSON." *None Genuine Without.*

NATURAL FOOD COMPANY, LIMITED,
 305 Cambridge Rd., Bethnal Green, LONDON, E.

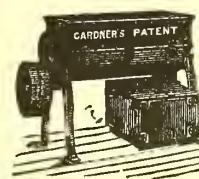
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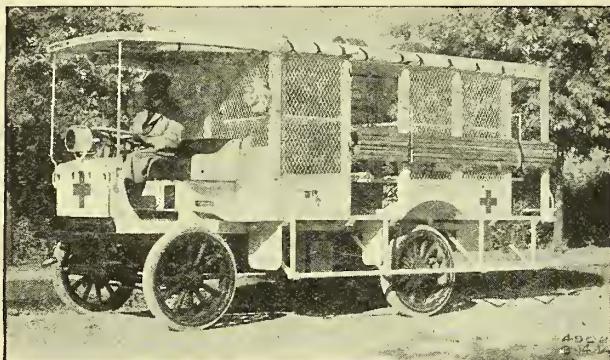


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THE "CHEMIST AND DRUGGIST"

WINTER ISSUE.

January 30th, 1915.

PRICE LISTS AND CIRCULARS INSERTED.

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A Weekly Journal of Pharmacy and of the Chemical and Drug Trades.
ESTABLISHED 1859.

The CHEMIST AND DRUGGIST is the leading journal addressing the Chemical, Drug and allied trades in the British Empire and other countries in the Old and New Worlds. It has a larger paid subscription circulation than any other Drug Trade Journal, and is the official organ of nineteen Chemists' Societies in Australia, Ireland, New Zealand, South Africa, and the West Indies.

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Summary.

See a statement on p. 52 regarding the C. & D. dose-tables and metric-equivalence card.

New researches on arrow-poison by Sir T. R. Fraser are reported on p. 40.

New observations on quinine-sulphate analysis are made by Dr. Polak (p. 41).

A series of sketches by Mr. Granville Shaw depicting the evolution of the pharmacist begins on p. 52.

The latest figures in regard to Germany's exports of pharmaceutical chemicals are given in an article on p. 51.

The Scottish Insurance Commissioners have issued Regulations for the election of the Drug Accounts Committee (p. 58).

Mr. E. Herbert Morris writes on the necessity for research if British chemical-manufacturers are to capture German trade (p. 54).

The British Pharmacopœia, 1914, is to be gazetted on Friday, January 1, 1915, and comes immediately into force. See articles on p. 49 and p. 50 (the latter about laudanum), and letters on pp. 62 and 63.

The German-owned trade-mark "Aspirin" is to be voided by the Board of Trade, but the mark owned by the Bayer Co., Ltd., remains on the register at present, as explained in an article on p. 50.

As the more important potency changes of B.P. preparations are due to international agreement, Mr. G. P. Forrester's observations on the subject are of interest—intrinsically and personally, for the author is a British prisoner of war in Germany (p. 52).

Winter Issue of the "C. & D."

For this issue, to be published on Saturday, January 30, the Publisher will accept circulars and price-lists for insertion as insets. Full particulars may be obtained from him on application.

European War.

Our Roll of Honour.—With the beginning of a new volume and entrance on the sixth month of the war, we continue the lists of men connected directly or indirectly with pharmacy and its allied branches who have responded to the call of King and country by service in the British Army and Navy. These lists constitute a Roll of Honour of which British pharmacy has every reason to be proud. The Roll is a unique contribution to the history of the drug-trade, which will be as valued a generation hence as it is to-day. It includes the names of two thousand young men, and since its commencement in our issue of September 19, 1914, seldom has a day passed without some addition to the Roll being received. This week's contribution is the fifteenth list, and, although short, it is remarkable in containing the names of five sons of a pharmacist, who has also a daughter and son-in-law doing service for the country. We shall continue the Roll as fresh additions to it are received and as space permits.

The "C. & D." at the Front.

Sergeant H. A. Brown, R.A.M.C., writing from the General Hospital in Rouen on Boxing Day, says: "I can safely say that I enjoy getting the old C. & D. out here. It keeps one in touch with all that is going on at home in the drug-trade."

The Belgian Doctors' and Pharmacists' Relief Fund.

During Christmas week the following subscriptions have been received, in addition to many others from medical men :

	£ s. d.
Mr. E. Quant	1 1 0
T. & H. Smith, Ltd.	25 0 0

A meeting of the Executive Committee was held on December 22, when the question of assisting with money Belgian refugees, being medical men or pharmacists, again came up for discussion, it being felt that the Fund should not be depleted by providing for any refugees the assistance which the Government had undertaken to supply, though in proper cases assistance should be granted. The Sub-Committee empowered for the present to make grants in urgent cases met on Christmas Eve, and granted assistance in all the cases brought before it. Sir Rickman Godlee has received information that a Central Committee for the relief of Belgian medical men and pharmacists has been organised in Toronto, while a similar movement has been started in New York. The action in the United States, which has followed in a gratifying manner upon representations made by the British Committee, promises to be large and fruitful. There is in Brussels a Provisional Belgian Committee which is attempting to deal with the terrible misfortunes that have overtaken the pharmacists, and with which it is the aim of the British Committee to co-operate. It is composed of a number of doctors and pharmacists, the following pharmacists being members: Mr. A. Delacre, President of the General Pharmaceutical Council; Mr. Breugelmans, General Secretary of the National Union of Pharmacy; Mr. Coels.

In Holland the movement to help Belgian pharmacists has been much assisted by an appeal made by Professor van der Wielan in the "Pharmaceutisch Weekblad." The sum of 22,200 florins has already been raised and placed at the disposal of the Belgian Committee. This is a very handsome sum to raise so soon, especially when one remembers the great strain that is being put on the finances of Holland, which, besides bearing the expenses of a mobilised army, is supporting 1,200,000 Belgian refugees. Our correspondent adds that it is hoped to increase this sum. The spirit shown in the case of Holland is one which might well be emulated by pharmacists in the United Kingdom.

The Supply of Glass.

The "Daily News," in an article on the glass-trade in war-time, refers to the fact that in certain lines of chemical and laboratory glass the imports have hitherto represented 100 per cent. of the consumption, with the result that the whole supply has now come suddenly to

an end. Soda-glass, which stands the highest temperature without discoloration, has been up to now exclusively a German product, and from it were made all the test-tubes used in British laboratories. The existing stocks of such articles as these—and to them may be added all kinds of scientific or surgical equipment, such as hypodermic syringes or Röntgen-ray apparatus—are being rapidly exhausted, and though British manufacturers are doing their utmost, all that can be hoped for is a substitute in most cases rather less efficient than the original article, and inevitably much more expensive. The difficulty of obtaining glass-blowers is very much felt, and as the training of an expert glass-worker begins from the earliest period of his life, it is not possible that the demand can be overcome. Germany has been able also to undersell other nations on account of the low rate of wages which prevails in that country.

Come!

Mr. George Weddell, whose name is familiar to British pharmacists as a partner with the late Sir Joseph Swan, F.R.S., in the business of Mawson, Swan & Weddell, Newcastle-on-Tyne (now Mawson-Proctor, Ltd.), first gave the drug-trade a taste of his literary skill in "How Do I Stand?" and later in "Arcana Fairfaxiana." When the British Pharmaceutical Conference visited Newcastle in 1909 his house in Jesmond was the scene of a garden-party. Since then Mr. and Mrs. Weddell have removed to Seaton Carew, a suburb of West Hartlepool, their house being on the sea-front, and Mr. Weddell saw the recent bombardment from his own windows, this being the occasion of the following verses published by the "Daily Chronicle":



MR. G. WEDDELL.

Sons
Of the Islands, rise!
The German guns—
Bellow to the skies
And rain their shell
Like hell
On England's coast.

This,
To fulfil their boast,
Is but the first
And not the worst
Their hate will hiss—
This German host.

They
Had sworn to come.
They drank "Unto the Day,"
For years prepared the way.
Now hear the shrapnel hum—
They—will come—again!

Drum
And trumpet sound again;
Never before such need
For glorious deed.
Come up, come up—men!
You see your country bleed:
Come!

High Explosives in Warfare.

Mr. William Macnab in "Nature" gives a short paper on the most important explosives used in war. For shell-filling these are picric acid, trinitrotoluol, and ammonal. Picric acid, with or without other ingredients, is used as melinite, lyddite, shimose powder, etc. With metals picric acid forms picrates which are much more sensitive and liable to explosion, which necessitates special precautions in dealing with it. Ammonal, consisting of ammonium nitrate, trinitrotoluol, charcoal, and aluminium in fine powder, is safer and more powerful than picric acid, but the hygroscopicity of the ammonium nitrate has to be guarded against. Trinitrotoluol is the most widely used high explosive for military purposes. It is used under the names "Trotyl," "Tritolo," "Tolite," "Tritol," "Trilite," and "T.N.T." the last-named being the designation in the British service. It is not so powerful as picric acid, but has other advantages. It is chemically stable, without action on metals, unaffected by water, and can be fused and run into shells in the molten state. Hard blocks of suitable size and shape are covered by electro-plating with copper, which prevents them being broken or having their edges chipped. In this form "T.N.T." is used for demolishing bridges, etc. The destructive effect of an explosion is caused by the almost instantaneous conversion of the solid explosive into gases, at a very high temperature, with consequent sudden exertion of an enormous pressure. These

gases are sufficiently poisonous, owing to the presence of nearly 50 per cent. of carbon monoxide, to account for the suggestion that deadly poisons must have been added to the contents of some shells used by enemies in warfare.

Pharmaceutical Roll of Honour.

Non Sibi sed Patriæ.—CICERO.

FIFTEENTH LIST.

AUSTIN, Lieutenant R. A., R.A.M.C., S.R., and Sergt.-Compounder Alfred C. Austin, South African Defence Force, sons of Mr. Richard A. Austin, L.P.S.I., Bray. COFFEY, John, druggist's assistant, Belfast, R.A.M.C. COOMBS, Sergt. H. Seymour (8th King's Royal Rifles), and Private W. Randolph Coombs (Maxim Section of the 7th Devons), sons of Mr. William T. Coombs, chemist and druggist, Plymouth.

DAVIDSON, Leslie F., son of Mr. P. Davidson, Ph.C., Brondesbury, N.W., second lieutenant, 9th South Lancashire Regiment, from the London University O.T.C.

GOULD, Frank A., 74 New Oxford Street, London, W.C. (a director of Camwal, Ltd.), sergeant of musketry, Kitchener's Army.

GRAY, Captain Clement, quartermaster of No. 2 General Hospital of the 2nd Australian Imperial Expeditionary Force, was appointed to his present position in October. Captain Gray was born at Cambridge in 1877, and was apprenticed to Mr. A. Deck. He obtained the B.Sc. degree and passed the Major examination of the Pharmaceutical Society of Great Britain in 1899. He was afterwards at Squire & Sons', Oxford Street, London, then emigrated to South Africa, subsequently going to the United States and to Australia. He was at McCarthy's Pharmacy, Hunter Street, Sydney, at the outbreak of the war.

MCLAUGHLIN, James, registered druggist, Belfast, R.A.M.C.

MILNE, — (assistant to Mr. J. Buchanan, chemist, Buckhaven, Fife), R.A.M.C.

ROBERTSON, Lieutenant Archibald, M.B., C.M., R.A.M.C. (15th Lancashire Fusiliers); Second Lieutenant Hector Robertson, 13th Argyle and Sutherlandshire Highlanders; Lieutenant Ian Robertson, Scottish Horse; Second Lieutenant Duncan Robertson, 16th Lancashire Fusiliers; and Mr. Alexander Robertson, pharmacist to the Oban branch of the Red Cross Society, sons of Mr. Alexander Robertson, pharmacist and chemical-manufacturer, Oban.

Personalia.

Mr. S. G. Isherwood, of Antwerp, has obtained an appointment as an examiner in the Press Bureau.

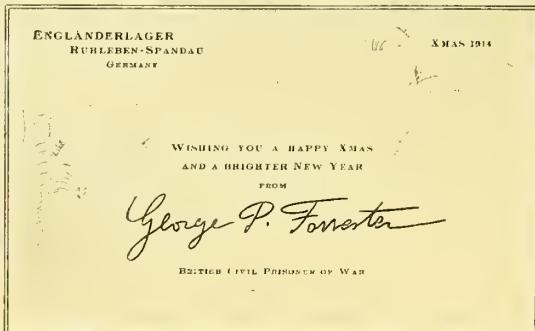
Private Harry Rogers, of the 10th Liverpool Scottish, son of Mr. E. H. Rogers, chemist and druggist, Wallasey Village, is at present in Flanders doing duty in the trenches.

Mr. Wilson, "Town" representative of Messrs. J. H. & S. Johnson, wholesale druggists and oil-merchants, Whitechapel, Liverpool, has been granted a commission in his Majesty's Forces.

Second-Lieutenant G. V. Pearce, Royal Warwickshire Regiment, reported by the War Office as missing on December 18, is the only son of Mr. William Pearce, M.P., F.C.S., Chemical-works, Bow Common, E.

J. W. Antcliffe, the elder son of Mr. H. Antcliffe (Sheffield), is a member of the crew of H.M.S. *Inflexible*, which has been in action off the Falkland Islands. The *Inflexible* was until recently the flagship of Sir B. Milne in the Mediterranean.

We subjoin a reduced facsimile of a postcard received from a valued contributor to the *C. & D.*, who is now a British civil prisoner of war at the camp near Berlin:



Mr. Van Hoorenbeek, Parkstone, whose pharmacy at Malines has been pillaged and destroyed by the Germans, has gone to France to fill a temporary engagement. He

On a charge of trading with the enemy, Gerrit L. Benkers, Eastcheap, London, E.C., said to be in a large way of business as a cocoa-manufacturer in London and Utrecht, was at the Mansion House on December 30 fined 100*l.*, with 50*l.* costs. A letter from Benkers had been intercepted, which showed that he agreed to sell cocoa to one Brodbeck, of Hamburg, sending it in the first instance to Utrecht.

Irish News.

Subscribers are invited to send to the Editor newspapers containing matters of trade interest. The items should be indicated.

Brevities.

As a result of a local appeal, Mrs. Catherine Dobbin, The Grange, Annadale, Belfast, was enabled to send for the Belgian refugees over one ton and a half of clothing to the depots in London, Dover, Belgium, Holland, and France. The Clyde Shipping Co. gave free conveyance of the cases to London.

At Dungannon on December 28, a man named John Watson was charged with the larceny of a bottle of eau de Cologne and a stick of shaving-soap, value 7*s.*, the property of Mr. R. E. Marshall, druggist, Market Square. Mr. Marshall stated that the defendant purchased methylated spirit from him, and he afterwards missed the other articles. The missing property was found in the defendant's possession. Defendant was committed for trial.

Guardians' Doings.

The Local Government Board have informed the Corrofin Board of Guardians that they cannot accede to the appeal for the reversion of the surcharge because the contract for drugs, etc., was given to Messrs. Boileau & Boyd, Dublin, though the tender was not the lowest. There would, however, be no surcharge in connection with the second half-year of the contract. The Clerk said there was nothing like making a decent fight; it had now ended satisfactorily.

Dr. Starkey, compounding of medicines at the Rathmines dispensary, has written to the South Dublin Union Guardians as follows :

"I was sorry to hear that the Board of Guardians are sending me an armchair! Please don't. I would wish to grow old more gracefully than that. I am in receipt of a good salary for compounding medicine, and have already a comfortable chair to rest on during intervals of work. I am thankful for my present capacity for work, and would feel queerly at being supplied with an armchair."

The Clerk said that Dr. Starkey had been there as compounder for a great number of years, and is a most conscientious man. The question of the armchair arose out of a suggestion made by some of the Guardians who recently acted as visitors to the dispensary. The letter was endorsed "Noted with pleasure."

Scottish News.

Subscribers are invited to send to the Editor newspapers containing matters of trade interest. The items should be indicated.

Aberdeen.

A soldier informed a local pharmacist that in the trenches cigarettes medicated with eucalyptus oil are served out.

At the annual meeting of the Spey, Avon, and Fiddich-side Farmers' Club, on December 23, Mr. Geo. Duncan, chemist, Dufftown, was admitted a member.

The Wednesday closing order was suspended last week and several of the chemists shut on Christmas afternoon. The wholesale houses also closed a few hours earlier.

The Senatus of the University has decided to do all in its power to facilitate the completion of the curricula of students who have joined any of his Majesty's forces, each case to be considered on its merits.

Professor Theodore Cash, F.R.S., of the Chair of Materia Medica, Aberdeen University, has been granted three or four months' leave of absence by the University

authorities, and is leaving for abroad for the benefit of his health.

At the Aberdeen Police Court on December 25, John Verner, a fisherman, was remanded on suspicion of having attempted to break into Boots' chemist's shop in Union Street, and on December 28 he was sentenced to thirty days' imprisonment.

The employés of the Aberdeen Combworks Co., Ltd., distributed 39*l.* last week to the Royal Infirmary and similar local institutions. Since the fund was instituted 1,870*l.* has been distributed for benevolent purposes. The office-bearers are : Mr. J. K. Ross, President ; Mr. Andrew Erskine, Vice-President ; Mr. James Linton, Treasurer ; and Mr. John Black, Secretary.

Edinburgh.

A girl of three has died in Leith Hospital from eating some tablets which had been kept in the house for medicinal purposes.

Lieut. C. Jardine, Royal Scots, son of Mr. T. Jardine (T. & H. Smith, Ltd.), has been offered a commission in the Royal Flying Corps.

Mr. James Watt, W.S., Edinburgh, is to present a tin of special foot-powder to each man in the Edinburgh Battalion now at the Castle.

Mr. Thomas Stephenson, Ph.C., filled a new role last week—that of Santa Claus at the treat given by the Rotary Club to the children of sailors and soldiers.

Dissatisfaction is felt in some quarters concerning the keeping open during a week in which a holiday falls on the customary half-holiday. The general experience is that practically no business is done after 1 P.M. on the usual half-holiday.

A well-signed appeal by the Presidents of the Royal College of Physicians, the Royal College of Surgeons, Edinburgh, and the Royal Faculty of Physicians and Surgeons, Glasgow, on behalf of Belgian medical men and pharmacists has appeared in the local papers. Mr. J. L. Ewing, LL.D., is the representative pharmacist who signs it, although Dr. John Gordon, President of the Aberdeen branch of the B.M.A., who also signs, is a Major man. Mr. J. Rutherford Hill, Resident Secretary, Pharmaceutical Society, Edinburgh, is one of those to whom subscriptions may be sent.

Fife.

After five months of the war there is now a distinct falling-off in the demand for "alien enemy" goods.

Seldom has there been experienced on the East Coast such a demand at the festive season for ladies' presents—manicures, perfumes, and hair-brushes. The reason is the presence of Territorials and "The girl I left behind me."

Fife chemists are now busy compiling their Insurance accounts for the year. While the new Tariff does not bring with it the "millennium" of pharmacy, it is a step in the right direction, and as such chemists intend to take full advantage of it.

Glasgow and the West.

Mr. McCallum, manager of the Chemists' Friendly Society, met with a rather serious accident last week. While crossing Wellington Street, a motor-cycle, turning a corner, came into violent collision with him. Mr. McCallum was thrown thirty yards in front. Fortunately, no bones were broken, but he received several scalp-wounds and a very serious shaking. The ligaments of one leg are injured.

At the meeting of the Scottish section of the Society of Dyers and Colourists held at the Royal Technical College, Mr. R. D. Hendry delivered an address on "Colour-making in Scotland." He referred to the Government scheme for promoting the manufacture of aniline dyes in Great Britain, which, he thought, will necessitate the return to Protection as a fiscal policy. Scotland is the most suitable country in the world for the development of the aniline-dye industry, as there is the raw material available and scope for both chemist and engineer. Grangemouth, he thought, offered the best site for works in Scotland.

Arrow-poison Research.

Sir Thomas R. Fraser before the meeting of the Royal Society of Edinburgh described a research which he has carried out on the poisoned arrows of the Abors and Mishmis of North-East India. Specimens of the poisoned arrows were examined, and it was found that the same poison was not present in all the arrows. In one group, chiefly used by the Mishmis, the poison was found to be aconite, derived from an unknown species. A peculiarity of action suggested that the species might be either *Aconitum ferox* or *A. heterophyloides*, as these are the only two species as yet known to possess this peculiarity. In the other group, used specially by the Abors, the arrows yielded, on extraction with ether, an oil which had the physical characters of the oil of *Croton Tigillum*. The arrow-poison itself, this oil as well as commercial croton oil, was found incapable of producing death in warm-blooded animals when subcutaneously injected, but, on the other hand, to be very lethal to frogs, causing much irritation and many haemorrhages in several parts of the body. The general conclusions were arrived at that the poison on the aconite arrows varies much in death-producing power. If the whole of the poison of one arrow were absorbed, which would be almost impossible, the most active arrows carried enough poison to kill three men, but the least active enough to kill only the one-fifth or the one-sixth part of a man. The arrows poisoned with croton-seeds were not directly lethal in man, and death could only result from the inflammation caused in the tissues transfixed by the arrowhead, which could be readily treated by ordinary surgical methods.

French News.

(From the "C. & D." Paris Correspondent.)

REPLACING GERMAN GOODS.—In order to satisfy the demands of the many French inquirers who desire to replace German goods by their British equivalents, the British Chamber of Commerce, Paris, has decided to publish, in French, a trade index of British manufacturers, merchants and producers, which will be largely distributed among French firms. After careful consideration it has been found that this is the most practical method of responding to the demands for British goods in France. The index in question will be confined to firms of undoubted British nationality. The general meeting will be held on February 12, when the election of six directors will take place. The Board has examined the question of the position of British firms the estates of whose enemy debtors in France have been sequestered, and it is suggested that in many instances a *requête* to the Civil Tribunal may be desirable.

WAR EFFECT.—One peculiar and regrettable feature of the German invasion of French territory, and of their occupation for long months past of the populous and industrial Northern departments, has been the practical isolation of numerous pharmacists, etc., from their native land. Many of these pharmacists were attached to French ambulances, and remained with the wounded when the enemy advanced. One such friend of mine, acting as pharmacist in the French territorial army, was at Laon, and has consequently now been for a long time under German rule. Others, like Dr. Lafay, who kept the first-class and well-known *officine* in the Chaussée d'Antin, Paris (described in detail in the *C. & D.* some years ago), are actually in captivity. Dr. Lafay, I understand, is at present a prisoner at Heidelberg. Dr. Albert Calmette, Director of the Pasteur Institute at Lille, is, it has now been ascertained, a prisoner of war at Munster (Westphalia).

THE TRUE SPIRIT OF SCIENCE.—The salient feature of the annual public meeting of the Academy of Sciences, held just before Christmas, was the address of the

President. M. Paul Appell remarked that the importance of the Academy increased from year to year, for almost every development of modern civilisation finds its root and origin in scientific research. The domain of science is illimitable, ranging from the world of stars to the molecule and the atom; from "celestial mechanics" to the factory, the ironclad, and the aeroplane; from the delicate phenomena of physics and chemistry to the great modern manufactories; from physiological and microbiological research to agriculture, medicine, and surgery—briefly, from the highest conceptions to the most practical applications. The research of scientific truth by a mind enamoured (*épris*) of moral beauty is the noblest object of human endeavour. But if pursued without a constant ideal of justice and humanity, if narrowly specialised, seeking only practical efficacy, it leads up to a selfish, ruthless, material civilisation, a sort of scientific barbarism like that which has gradually crept over modern Germany. Erudition is not necessarily education, and the laborious acquisition of knowledge must not be confounded with the unconscious development (*épanouissement intime*) of civilisation. He then rapidly reviewed the scientific and political aspects of the past year, referred to the deaths that had thinned their ranks—M. Van Tieghem, the eminent botanist; Professor Eduard Suess, "one of the few original savants of Austria-Hungary"; A. G. Considère, Sir David Gill, Perez, and Rosenbusch. The proceedings terminated by an historical notice of the life and work of M. Auguste-Michel Lévy (the eminent geologist who died a couple of years ago), read by M. Alfred Lacroix, Perpetual Secretary of the Academy.

Aix-les-Bains.

ALTHOUGH placed in an apparently sequestered corner of Savoy, Aix-les-Bains is really very central, being reached with equal ease by the Swiss from Geneva or the Italian from Turin, while the long distance from Paris or London is compensated for by a speedy and comfortable train-service. The present hydrotherapeutic establishment of the town is owned by the State, and is directly administered by State officials. The number of visitors is about 40,000-a-year.

Aix-les-Bains is, as its name implies, a bathing-place *par excellence*, but there are two springs, which have during the last few years been canalised and brought to the *buvette* just opposite the Etablissement Thermal. Both of these are carbonated waters (Massonat and Deux Reines), and are recommended for gout, rheumatism, etc. The Saint-Simon spring, fifteen minutes' walk from the town, is like Evian water. The Marlizoz springs, a mile out of the town, yield sulphur and bromo-iodide water.

Gout and rheumatism are the maladies chiefly treated at Aix-les-Bains, its douche massage being stated to be *unique au monde*. Is it because the Aix masseur is no respecter of persons that the place has an especial attraction for crowned heads? Queen Victoria was there years ago. I saw in a pharmacy window a Royal Appointment which gave the date. There are several English doctors in Aix-les-Bains, while pharmacies are legion and often handsome. Need one say the inscription "English Chemist" is freely used?

WEST INDIAN PRODUCE.

The Imperial Department of Agriculture of the West Indies is devoting much attention to the extended cultivation of medicinal plants in the West Indian Islands, and to the improvement of the various products. The Government lime-juice factory at Castries, St. Lucia, restarted operations last summer, additional machinery having been installed. It is officially reported that the limes are coming in better than last year, but there is lack of uniformity in size, and it is desirable that vendors should endeavour to supply fruit of normal size in good condition. The Department has taken steps to bring this matter to the notice of the peasants and others supplying the factory with material. The factory crushes at the rate of about ten barrels of fruit per hour, and it is estimated that the output can be increased when larger supplies of fruit are available. From Grenada and Carriacou favourable reports regarding the lime-crops have been received. Small shipments of cassia-pods have been made from Grenada, and it is anticipated that this drug will be much more extensively produced in the future.

Australasian News.

"The Chemist and Druggist" is supplied weekly to all the members of nine Chemists' Societies in Australia and New Zealand.

The Commonwealth.

PHARMACEUTICAL DEFENCE, LTD.—The second annual report has been issued of the directors in Victoria, New South Wales, South Australia, and Western Australia, together with statements of accounts, balance-sheet, and list of members. The membership now stands at 441. The report is a very satisfactory one, and much good work has been done in defending the interests of the members.

New South Wales.

REPLACING GERMAN GOODS.—The Pharmaceutical Society has issued a circular to medical practitioners asking them to prescribe under non-proprietary names such drugs as aspirin, urotropine, and heroin, and also to write liquor cresolis co. in place of lysol, hitherto emanating from Germany. Pharmacists are also asked to assist in the campaign.

New Zealand.

C.D.A.—The Chemists' Defence Association (Incorporated) of New Zealand has published its constitution and rules. These are practically identical with the memorandum and articles of association of Pharmaceutical Defence, Ltd., of Australia, with such changes of terms as are necessary by the change in title. As in P.D.L., the entrance-fee is £1., the annual subscription 1*l.*, 10*s.* of which is to be used to insure the member to the extent of 100*l.* The directors may pay an additional sum, and the Association will defend the pharmacist in any cases where the general interest of pharmacists is likely to be affected, but not in proceedings under the Pharmacy, Medical, or Poisons Acts. Legal advice is made available to the members.

KAURI-GUM INDUSTRY.—One effect of the European War was to diminish the demand for kauri gum to such an extent that the gum-diggers were placed in a serious position. There are from 3,000 to 4,000 gum-diggers, who were in danger of being thrown into the ranks of the unemployed. The Government met the situation by legislation, which gave power to take over the stocks of kauri and advance to the gum-digger a proportion of the value based upon the uniform price which prevailed before the war. The Kauri-gum Industry Amendment Act, which gives this power to the Government, confers authority to effect insurances on the stock and to work, if necessary, any Crown lands situated within a kauri-gum district. The measure has already had the effect of steadyng the price of the commodity, and has prevented unemployment among the workers.

Victoria.

A NEW HEALTH BILL is on the programme of the Government. A comprehensive scheme is proposed, with a Minister, a permanent head of the Department, who would be Registrar but not a member of the Council, and a council of experts—the Dean of the Faculty of Medicine, Melbourne University; an engineer, an architect, four or five doctors, a statistician, and the President of the Pharmaceutical Society.

THE MEDICAL ACT OF VICTORIA, 1890, is one of those which have been consolidated by Mr. Justice Cussen, and his evidence before the Joint Select Committee of both Houses of Parliament has just been published. One object of the consolidation is to bring about uniformity of wording and to remove anomalies. The Medical Bill is divided into three parts, dealing with medical practitioners, dentists, and one with chemists, taken from Acts passed at different times, and, though very often designed to accomplish the same purpose, in some particular respects they do it in different language. The method adopted throughout the consolidation has been to take the best provisions from the three parts and to harmonise them. One important provision gives the Board in each case the power to examine upon oath, but in the medical and pharmacy sections the power to impose a penalty upon any witness who does not attend had not been given, though in the more recent Dentists Act it is provided. Power is now given to impose a penalty of not more than 20*l.* in any case. The Consolidation Bill may be introduced early in the first Session of the next Parliament. The Sale of Poisons Bill has also been consolidated.

ITALIAN BORIC ACID.—The exports from Leghorn during 1913 were 1,272 tons (25,120*l.*), against 1,500 tons (29,912*l.*) in 1912. Great Britain received 44 per cent. of the total, against 31 per cent. in 1912. Of Borax the exports were 23 tons (370*l.*), against 78 tons (1,248*l.*) in 1912.

Netherlands Notes.

(From the "C. & D." Correspondent.)

Chemical Industry.—The "Nieuwe Courant" has published a series of articles regarding the influence of war on Dutch industries, the ninth being devoted to chemical-industry, but only certain branches are dealt with. From this survey it appears that five large soda-works have nearly closed down, owing to the cessation of supplies of calcined soda from the Solvay Works in Belgium. Supplies of the raw material have, however, been obtained from England, and so the threatened closing of the soda-factories has been averted. The manufacture of pharmaceutical chemicals, which is carried on in about ten works, has been inconvenienced, on the one hand, by the stoppage of supplies of raw and intermediate products from Germany and the prohibition of the export of the finished chemicals. The prohibition referred to has since been modified, and the position has consequently improved. Another difficulty arose in regard to the manufacture of surgical dressings, the export of which it was necessary to prohibit. One factory at Amsterdam had its whole output reserved for the use of the military authorities. When a sufficient quantity had accumulated, however, conditions of export were modified. The makers of chemicals for technical purposes have also experienced considerable difficulties, owing to the cessation of the imports of pyrites and hydrochloric acid. The shortness of aniline dyes is also felt, and the present attitude of Germany, which requires potassium nitrate—very much wanted in Germany—to be sent in exchange for dyes, has produced a deadlock, as Holland has no potassium nitrate to spare. The co-operation of all parties engaged in chemical-industry in Holland has had the effect of modifying the difficulties and produced a more satisfactory condition of affairs than had been hoped for.

Quinine-sulphate Researches.—Mr. Z. P. Polak, of Amsterdam, obtained on December 18 the degree of Doctor in Chemistry, his thesis being on quinine sulphate. A large number of methods have been published for controlling the purity of quinine and quinine salts. The Pharmacopœias of the world have changed the assay-process at every revision, but now nearly all Pharmacopœias have adopted one of the oldest methods—the ammonia-test of Kerner as modified by Weller. The principal impurity in quinine sulphate is cinchonidine sulphate. These two alkaloids are separated in the form of sulphates, but notwithstanding the considerable difference in solubility, the complete removal of cinchonidine sulphate is difficult. This was formerly attributed to the existence of double salts, but now the formation of mixed crystals is considered to be the cause of the difficulty in manufacturing pure quinine. Mr. Polak in his thesis has tried to prove qualitatively and quantitatively the existence of mixed crystals, and to find out what influence they have on the manufacture of pure commercial quinine and on the ammonia-test of Kerner-Weller. Mr. Polak proves the existence of mixed crystals, although he finds the composition of the crystals is not always the same. The crystals which are first precipitated contain more cinchonidine sulphate than those formed later on. That is the reason why in the purification of commercial quinine the crystallisation from a solution in water should take place very slowly and under constant agitation. As to the reaction of Kerner-Weller, which is made use of for the examination of the purity of commercial quinine, this is not found to be very effective. The proportion between quinine and cinchonidine in the solution which is obtained according to the pharmacocional method is not the same as that in the sample itself. It contains comparatively more cinchonidine, as owing to the influence of the air more of the mixed crystals has changed into a mixture of quinine and cinchonidine sulphate, and in this form the latter is more easily soluble than as mixed crystals. A large portion of the cinchonidine sulphate, however, does not pass into the solution when working under the conditions indicated in the Pharmacopœia. About 8.5 per cent. of the salt is thus withdrawn from the reaction, and this renders the test less sensitive. This fact would not make the reaction unfit for use, however, but as the balance between the solution and the crystals is not stable, the reaction is so much more liable to change through the influence of different circumstances. The test must be rejected as a criterion for the purity of quinine sulphate. According to Mr. Polak, the polarimetric method is the best for judging the purity of the commercial salt. He remarks, however, that the specific rotation of mixtures of the sulphates is not exactly an additive property, although it lends itself fairly well for a determination of the composition of these mixtures, the sensitiveness being limited to about $\frac{1}{2}$ per cent. of cinchonidine sulphate.

Limited Companies.

New Companies Registered.

P.C. means Private Company and R.O. Registered Office.

USA PHOTO PAPERS, LTD. (P.C.)—Capital 2,000*l.* R.O., 4 Broad Street Place, E.C. STANDARD OPTICAL CO., LTD.—Capital 2,000*l.*, in 1*l.* shares. R.O., 62 Hatton Garden, E.C.

U.K. CHEMICAL PRODUCTS, LTD.—Capital 20,050*l.* Objects: To carry on the business of chemists, druggists, drysalters, etc.

"OSOGEN," LTD. (P.C.)—Capital 2,500*l.*, in 1*l.* shares. Objects: To carry on the business of manufacturing-chemists, etc. The first directors are P. Pratt, Colonel C. M. Western, and W. N. Beaumont. R.O., 18 Walbrook, E.C.

B. MIDDLETON (CHEMIST), LTD. (P.C.)—Capital 500*l.*, in 1*l.* shares. Objects: To carry on the business of wholesale druggists, manufacturing veterinary and agricultural chemists, etc. W. B. C. Middleton is the first director. R.O., Pharmacy House, Church Street, Askern Spa, Yorks.

JOSEPH G. WATSON (MANCHESTER), LTD. (P.C.)—Capital 10,000*l.*, in 1*l.* shares. Objects: To carry on the business of general produce-brokers, agents and merchants, drysalters, chemists and druggists, etc. The first directors are J. G. Watson (managing director) and J. A. Charlton. R.O., 4 York Street, Manchester.

NEW OXYDOL PRODUCTS, LTD.—Capital 5,000*l.* Objects: To take over the assets and liabilities of Oxydol (1914), Ltd., to carry on the business of chemists, druggists, etc. The first directors are Sir William Ramsay, K.C.B., D.Sc., F.R.S., W. S. Rawson, M.A. Oxon, M.I.E.E., C. W. Beatty, and M. O. Beale. R.O., 4 London Wall Buildings, E.C.

CURTIS MEDICAL LABORATORY, LTD.—Capital 500*l.*, in 1*l.* shares. Objects: To take over the business of vendors of surgical appliances and patent medicines carried on by J. Key and H. Key at 74 and 76 Hill Street, Birmingham, as "Curtis & Co." The first directors are J. Key, J. Walker, and J. T. Wade. R.O., 74 and 76 Hill Street, Birmingham.

LODGE-EVANS PROCESS CO., LTD. (P.C.)—Capital 1,000*l.*, in 1*l.* shares. Objects: To take over certain patents and rights for inventions relating to the application of dyestuffs, to adopt an agreement with E. Lodge, teacher of dyeing, Huddersfield, and J. M. Evans, to carry on the business of chemical-manufacturers, etc. The first directors are E. Lodge, J. M. Evans, and G. H. Wood.

ARTHUR BERTON, LTD.—Capital 60,000*l.*, in 10*l.* shares. Objects: To take over the business of Arthur Berliner, manufacturer of and dealer in cotton goods, surgical dressings, and chemists' sundries, carried on at 15 and 17 Worship Street and 2A Tabernacle Street, London, and at Benn Mills and Waterfold Mills, Bury, and to adopt an agreement with Arthur Berton. The first directors are Arthur Berton, Herbert Berton, H. J. J. Cook, and T. H. Ford.

"COMPO," LTD. (P.C.)—Capital 80,000*l.* Objects: To take over the business of a soap-maker carried on by H. Pratt at the "Compo" Works also known as Albert Works, Dukinfield (Ches.), as "Henry Shaw & Co.," and to carry on the business of soap and candle makers, tallow-merchants, and chandlers, chemists, druggists, etc. The first directors are H. Pratt, A. Pratt, and H. Pratt, jun. R.O., Albert Works, Crescent Road, Dukinfield, Ches.

MILITARY AND GENERAL SUPPLIES CO., LTD. (P.C.)—Capital 10,000*l.*, in 1*l.* shares. Objects: To carry on the business of Government and general contractors for the supply of, among other goods, drugs, medicines, surgical, medical, hygienic, and sanitary appliances and apparatus, and machinery, electrical and other apparatus, etc. The first directors are S. C. Mercer and J. C. Mardel (life directors). Qualification, 100 shares. Solicitor, J. Clarke, 24 Old Square, Lincoln's Inn, W.C. Secretary, J. C. Mardel.

Company News.

SYNTHETIC PRODUCTS CO.—The second report of this company for the year ended June 30, 1914, which has been issued, states that the fermentation-plant for the production of acetone and butyl alcohol has been established at King's Lynn in a condition suitable for regular working on a large scale, although additional plant for refining is still necessary. Soon after starting the plant some considerable difficulty was experienced in keeping it free from influences other than the special bacteria which are employed in the company's process, and it became necessary to remodel the plant and to devise new methods of sterilisation. By the

end of June last this was accomplished, and regular working with good yields became the established practice. The fermentation section of the company's interests could be carried on advantageously during the war should the Government desire the manufacture of acetone in this country to be continued. The manufacture of synthetic rubber on a small working scale has been successfully accomplished. Arrangements to demonstrate the commercial value of synthetic rubber as an outlet for butyl alcohol, and to determine the best commercial conditions of vulcanisation, with a view to having its wearing properties officially tested, are being made, but have been interrupted owing to the Government's taking over the Rainham works, where the rubber-plant is installed. An application has been received from a wealthy manufacturing corporation in the United States, who desire to develop the company's processes there.

CAMWAL, LTD.—The annual general meeting of shareholders was held at the Frascati Restaurant, Oxford Street, London, W., on December 29, Mr. Hayward M. Davenport (chairman of directors) presiding. In moving the adoption of the report and balance-sheet (*C. & D.*, December 26, p. 50), the Chairman said that the past year was one of the best on record for the class of business; owing to the magnificent summer, the company had done an increasing trade all round, and had opened up a good many new districts. Had it not been for the European War, their profits would have been much larger than they are. It had to be borne in mind that during August and September—two of the best consuming months—their business was completely upset, added to which the War Office commandeered all their horses over seventeen hands and took away their 14-ton motor-lorry. Taking these facts into consideration, however, the results were very satisfactory. Referring to the new British aperient mineral water, "Aquaperia," the Chairman said there is now an enormous demand for British aperient waters throughout the country. Hitherto the trade had been in the hands of Germans, Austrians, and Hungarians, and in introducing "Aquaperia" the company felt confident that with the co-operation of chemists they could capture the "enemy" trade. They did not put Aquaperia forward as a substitute for foreign waters which were becoming unobtainable, but the intention is to supplant them for all time and hold the trade after peace is declared. A large percentage of the profit (bigger than that on any similar aperient water on the market) is being given to chemists, and the retail price would be 1*s.* or 10*d.* minimum on P.A.T.A. list. The water is bottled at the Harrogate Spring of the company and is a high-class article which can be confidently recommended to customers, a large number of whom had already expressed their willingness to make window-shows. Mr. Goodall seconded the report, and Mr. Wallington made his annual attack on the "goodwill" item, which he again urged should be separated from other items, and would have to be dealt with before dividends could be paid on the ordinary shares. Mr. Campbell congratulated the board on their achievement, as there is now only 2*½* percent outstanding on the preference shares; perhaps next year, he said, there would be a little for the ordinary shareholders. Mr. Knight, Mr. Goodall, and Mr. Horace Davenport having spoken, the report was adopted, with two dissentients. The usual remuneration of 440*l.* was voted to the chairman and directors, and Mr. Frank A. Gould was re-elected to the board of directors. Mr. Gould gave an exceedingly interesting account of his work as sergeant of musketry in Kitchener's Army at Bisley. The auditors were re-elected.

Gazette.

Partnerships Dissolved.

GAZE, W. A., STONEMAN, W. H., and LOVELL, H. S.—8-11 Baden Place, Crosby Row, Borough, S.E., manufacturing chemists, under the style of H. S. Lovell & Co.

WRIGHT, J. S., and WILSON, R., 209 and 521 Manchester Road, and 80 Horton Lane, Bradford, physicians and surgeons, under the style of John S. Wright and Robert Wilson.

THE CHEMIST was with a friend in his laboratory, and showed his friend a bottle of a yellow liquid, remarking, "This mixture, prepared by me, will, in the space of a fortnight, fatten a pig out of all proportions!" The friend would not believe it, and said with a smile, "And would you like me to drink it?"

Births.

Authenticated notices are inserted without charge.

BARLOW.—At Poeklington, on December 27, the wife of Walter Barlow, chemist and druggist, of a daughter.

CAMM.—At New Buckenham, Norfolk, on Christmas Day, the wife of C. P. Camm, chemist and druggist, of a son.

HALL.—At 196 Belsize Road, Hampstead, N.W., on December 26, the wife of A. J. Hall, dispensing pharmacist, of a son.

LUND.—At Castle Howard, on December 24, the wife of F. A. Lund, chemist and druggist, 94 Westborough, Scarborough, of a daughter.

Marriages.

Authenticated notices are inserted without charge.

CURRY—MCGIVERN.—By special licensee, on December 14, George Curry, chemist and druggist, 130 Windmill Street, Gravesend, to Annie McGivern, Boetle, late of Melbourne, Australia.

CUTHBERT—KEWLEY.—At St. Nicholas Street Church, Lancaster, by the Rev. J. C. Pollard, on December 26, Thomas Harrison Cuthbert, chemist and druggist, son of Mr. John E. Cuthbert, chemist and druggist, Lancaster, to Elizabeth, elder daughter of the late Thomas Kewley and Mrs. Kewley, Lancaster.

TREADAWAY—HARRISON.—At St. Clement's Church, Leigh-on-Sea, by the Rev. Stuart King, on December 19, Frederick William Treadaway (second son of Mr. W. T. Treadaway, London manager of F. H. Faulding & Co., 54 Great Tower Street, E.C.) to Ida, youngest daughter of Mr. T. H. Harrison, Leyton.

Deaths.

Authenticated notices are inserted without charge.

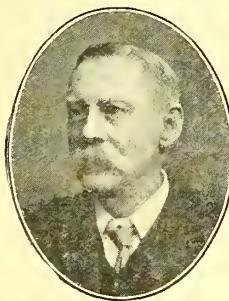
CLARKE.—At Stroud Green, London, N., on December 23, suddenly, of heart-failure, Mr. Robert R. Clarke, for forty-two years representative of the York Glass Co., aged seventy.

COWDERY.—At Northampton, on December 26, suddenly, Mr. Frederic Cowdry, chemist and druggist, who until June 1912 had been in business in Northampton for a quarter of a century. Mr. Cowdry passed the Minor examination in February 1872, and subsequently acquired the business established by Mr. Berry in the Corn Exchange Buildings, Northampton. Later he moved to more prominent premises in St. Giles' Square. In 1912 he went to Canada, but returned to Northampton, and died in lodgings. As he had not been attended by a doctor lately, an inquest was held. The evidence showed that Mr. Cowdry had been as usual on Christmas Day. At nine o'clock on Boxing Day morning he was found in his room very ill, and he died shortly afterwards. Medical evidence showed that death was due to fatty degeneration and valvular disease of the heart, and a verdict to that effect was returned. The Borough Coroner, in his summing-up, said a more courteous or kindly personality, or one more thoughtful for others, it would be impossible to meet. The funeral on Tuesday was attended by several Northampton chemists. Mr. Cowdry was one of the founders of the Northampton Chemists' Association, and was its Hon. Secretary and Treasurer from its foundation in 1900 until his retirement in 1912. He was a homeopathic chemist.

COX.—At 53 High Street, Greenhithe, Kent, on December 20, Mr. Edwin Joseph Cox, chemist and druggist, aged sixty-seven.

DARLEY.—At 16 Ditchling Road, Brighton, on December 16, Mr. Henry Charles Darley, chemist and druggist, aged eighty.

ILIFFE.—At Market Place, Nuneaton, on December 22, Mr. Geo. Iliffe, Ph.C., aged sixty-eight. Deceased, who



MR. F. COWDRY.

morning he was found in his room very ill, and he died shortly afterwards. Medical evidence showed that death was due to fatty degeneration and valvular disease of the heart, and a verdict to that effect was returned. The Borough Coroner, in his summing-up, said a more courteous or kindly personality, or one more thoughtful for others, it would be impossible to meet. The funeral on Tuesday was attended by several Northampton chemists. Mr. Cowdry was one of the founders of the Northampton Chemists' Association, and was its Hon. Secretary and Treasurer from its foundation in 1900 until his retirement in 1912. He was a homeopathic chemist.

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ILIFFE.—At Market Place, Nuneaton, on December 22, Mr. Geo. Iliffe, Ph.C., aged sixty-eight. Deceased, who

had been ill since last September, was registered as a pharmaceutical chemist in 1869. He carried on business for many years in conjunction with his late brother, Mr. T. Perkins Iliffe. He was a director of the Nuneaton Gas Co.

LANE.—At Beekenham, Kent, on December 23, Mr. Charles Lane, of Tugela, Copers Cope Road, Beekenham, and Idol Lane, London, aged sixty-six. Mr. Lane was connected with the liquorice-trade.

PITCHFORD.—At 8 Cotham Gardens, Bristol, on December 22, Mr. William Pitchford, chemist and druggist, aged sixty-one. Mr. Pitchford was a native of Plymouth, and was apprenticed to the late J. Poulton, Newton Abbot, and after qualifying in 1874 went to Messrs. Hitecock & Co., Oxford, then became senior assistant to Messrs. Ferris & Co., Bristol. Thirty-five years ago he purchased a pharmacy at Cotham Hill, and subsequently opened at North View, Westbury Park, being assisted in his business by his son, Mr. W. T. Pitchford, Ph.C., Hon. Secretary of the Bristol Chemists' Association, an organisation with which Mr. Pitchford, sen., was identified for thirty-five years. He was closely associated with religious work at Pembroke Congregational Chapel, Clifton. In his long business career in Bristol Mr. Pitchford won the respect of all his colleagues, and he was one of the most esteemed citizens. At the funeral on Monday there was a service at Pembroke Chapel, Clifton, and the interment was at Canford Cemetery, Westbury-on-Trym.

RENNIE.—At 111 Napier Street East, Oldham, on Christmas Eve, Lucille, younger daughter of John Rennie, F.C.S. (W. B. Cartwright, Ltd.), Horsforth, near Leeds, aged fourteen months.

THOMPSON.—At Birkenhead, on December 23, suddenly, Mr. William Shoot Thompson, chemist and druggist, aged fifty-six. Mr. Thompson had for two months been troubled with bronchial asthma. After serving his apprenticeship in Bradford, he was for many years with Mr. W. C. Hebeda, Halifax, later succeeding to the business of the late Mr. Farr, 10 Crown Street, Halifax, and remaining there until 1913, when he acquired a Birkenhead business, and carried on two pharmacies there. He leaves a widow and two young children.

TOD.—At 24 Talbot Road, Highgate, London, N., on December 22, Mr. Robert Tod, aged seventy-two. Mr. Tod was a produce-broker of Mincing Lane, and it was his words that began our War News section on December 19, viz.: "You can take it from me—and I am one of the oldest sworn brokers in the City of London—that if you had told me on August 4 that we should have come to December 12 with so little actual loss, I would not have believed it. It's because Mincing Lane has played the game, Liverpool has played the game, we have all played the game—confidence in ourselves and our leaders. We may have a set-back now and then before the war is over, but if we do as we have done, we'll win through." He was a singularly gifted man, and the youngest son of the late William Tod, Lasswade, Midlothian, another son being the author of "Bits from Blinkbonny." Mr. Tod was well known to many connected with the Mincing Lane drug-trade and to Scottish pharmacists. He was at business on the day before his death, which was due to an apoplectic seizure.

WRIGHT.—At Slyth Villa, Gordon Hill, Enfield, N., on December 19, Mr. Herbert Wright, chemist and druggist, aged sixty-eight. Mr. Wright was formerly in business at Burton-on-Trent, and had been residing in Enfield for fifteen years.

Killed in Action.

On December 17, Harold Alexander Holme, youngest son of the late Mr. H. T. Holme, chemist and druggist, and of Mrs. Holme, Market Place, Wallingford, aged nineteen.

Official information has been received in Glasgow of the death of Private James Miller, Scots Greys, who was killed in action. He had been for many years in the employment of Cockburn & Co., Ltd., chemists and druggists, 130-140 Howard Street, Glasgow.

SOYA BEANS.—In 1913 the Hankow trade in soya beans proved very disappointing to foreign exporters, with the exception of one firm of merchant shipowners, who bought up about one-half of the total crop and carried it home by their own vessels. In consequence of the lower rates charged by them for freight they were constantly in a position to undersell other exporters, who were bound by agreement to ship by the China Homeward Freight Conference. The exports from Hankow last year were 8,418 piculs, against 35,388 piculs in 1912.

Business Changes.

Authenticated notes are inserted without charge if not in the nature of advertisement, and subject to Editorial approval.

MR. FRANK MIDGELEY, chemist and druggist, has purchased the pharmacy which Mr. C. H. Milburn carried on for many years at 306 Kirkstall Road, Leeds.

MR. CHARLES C. ALCOCK, late of 2 Mount Street, Rochdale, has purchased, through the Association of Manufacturing Chemists, Ltd., the business lately carried on by Mr. Newman Hulme at 39 Walmersley Road, Bury.

MR. S. HOWARD-JOHNSON, chemist and druggist, who has disposed of his business at 163 Fosse Road North, Leicester, to Johnsons (Leicester), Ltd., has taken over the Westcotes Pharmacy, 249 Narborough Road, Leicester.

MESSRS. GRANVILLE WOOD & CO., chemists and druggists, High Street, Oldham, whose premises have been taken for street-improvement purposes, have disposed of their prescription-business to Braddock & Bagshaw, Ltd., 37 Yorkshire Street, Oldham.

Wills.

MR. ROBERT LAINE, chemist and druggist, Melksham, Wilts, who died on October 30, aged eighty-five, left estate of the gross value of 3,414*l.* 2*s.* 2*d.*, of which 3,386*l.* 3*s.* 3*d.* is net personalty.

MR. HENRY LISTER HARGREAVES, Ph.C., Oldham, who died on August 14, left estate of the gross value of 32,955*l.* Among the bequests is 200*l.* to the Pharmaceutical Society of Great Britain, and 100*l.* to Thomas Hawling, dispenser at the Oldham Royal Infirmary. The last-named institution receives 5,000*l.* and the ultimate residue, which is to be used for a convalescent home.

MR. EDWIN JOHN ORCHARD, J.P., chemist and druggist, Elmfield, Petersfingier, near Salisbury, who died on November 5, left estate of the gross value of 5,309*l.* 6*s.* 8*d.*, of which the net personalty has been sworn at 3,857*l.* 10*s.* 4*d.* Probate of his will has been granted to his widow, Mrs. Sarah Maton Orchard, and his son-in-law, Mr. S. S. Williams, to the last-named of whom he left 50*l.* He left 500*l.* and his household effects to his wife, Mrs. Sarah Maton Orchard, and all other his property to his three daughters, Bertha M. Orchard, Charlotte Williams, and Martha Rogers, in equal shares.

Personalities.

Authenticated notes are inserted without charge if not in the nature of advertisement, and subject to Editorial approval.

MR. CHARLES E. TRITTON, pharmacist, of Hobart, Tasmania, and Melbourne, Vic., has arrived in Cape Town.

COUNCILLOR W. H. WANDLESS, chemist and druggist, has been appointed Chairman of the Council School Managers at Whitehaven.

MISS JOAN ANDREWS, apothecary's assistant, 28 Marlborough Avenue, Hull, of the Hull Orthopaedic Hospital, was chosen by the Hull Guardians, out of twenty applicants, as dispenser at the Hull Workhouse Infirmary.

As an old Darwen Borough Magistrate, Alderman Ralph Shorrock, chemist and druggist, of Market Street, received his first pair of white gloves at the court sitting on December 24. For the third time since the war commenced there were no cases for trial.

MR. W. C. ANDERSON, Chairman of the National Labour Party, who has been elected Member of Parliament for the Attercliffe Division of Sheffield in succession to the late Joseph Pointer, served an apprenticeship as a chemist, and was for some time a chemist's assistant. He attended the University of Aberdeen for some time, with a view to qualifying for the ministry, but, owing to a breakdown in health, returned to pharmacy. While assistant with the late John Macmillan, Glasgow, he was appointed to a position in the organising department of the National Shop-assistants' Union, and soon afterwards left pharmacy to devote himself entirely to social politics.

CHINESE ALBUMEN.—During 1913 the exports of egg-albumen from Hankow amounted to 12,224 piculs, against 10,440 piculs in 1912; of egg-yolk the exports were 64,117 piculs, against 44,945 piculs. (Picul=133*lb.*)

Almanacs and Calendars.

This column is for brief mention of annual souvenirs presented by retailers to their customers, or issued by manufacturers and wholesalers. Specimens for notice should be addressed to the Editor of the *C. & D.*

MR. A. Mortimer, St. James's Pharmacy, Harrogate, sends out a card calendar of high-class appearance, which is mainly occupied by a photogravure. The calendar portion is in the form of monthly tear-offs, the wish being expressed upon the first leaf of "A Twelvemonth of Progress and Contentment."

Messrs. Carnegie Bros., chemical-merchants and manufacturers of surgical dressings and appliances, 33 to 35 Charterhouse Square, London, E.C., send out a desk blotting-pad, which has on the left-hand side a substantial diary, and on the right hand a narrow calendar with weekly tear-offs. It is a useful desk companion.

The calendar sent out by Mr. Edmund Jones, dispensing chemist, Miles Bank, Hanley, is distinctive. It is for hanging up. The outer page has upon it a quaint coloured drawing by G. F. Christie. On the inside is a neatly printed greeting in scopia-coloured ink, with a short announcement regarding dispensing and the special preparations of the business. A separate sheet contains the calendar proper. Other literature is sent out to customers at the same time as the calendar.

The "Perfumery Record" Year-book and Diary, which was published this week, is edited by Mr. John C. Umney, F.C.S., and contains thirty-six pages of literary matter on subjects connected with essential oils. There is, first, a review of the year's work, and this is followed by articles on the relative permanence of essential oils, the essential oils of the new British Pharmacopœia, the solubility of water in essential oils, and the analysis of essential oils. The other contents include useful tables of the constants and constituents of normal essential oils. We note with interest that arrangements have been made with Mr. E. M. Holmes for the supply of information and advice connected with the identification of primary material, plant-cultivation, etc. Mr. Holmes's knowledge and experience should be of great value to inquirers.

Trade Notes.

SURGICAL APPLIANCES.—Messrs. Carnegie Bros., 33 to 35 Charterhouse Square, London, E.C., have issued a wholesale and export list of the various surgical dressings and appliances which they supply. The prices are revised for the new year.

CAFWISE COLOGNE is the name given by Evans, Gadd & Co., Ltd., Exeter, to an excellent perfume of the Eau-de-Cologne type. This is put up nicely in 2-oz., 4-oz., and 8-oz. bottles to retail at P.A.T.A. minima of 1*s.* 1*d.*, 2*s.* 2*d.*, and 4*s.* per bottle respectively.

MAY, ROBERTS' LIST.—The special price-list of May, Roberts & Co., Ltd., 7, 9, and 11 Clerkenwell Road, London, E.C., which was issued in December, consists of twenty-four pages. It contains lists of goods (1) advanced in price, (2) unable to be supplied, (3) reduced in price, and (4) additions. In addition to druggists' sundries, photographic supplies and drugs are included. The cover of the special list has upon it a fine colour-photograph of the Union Jack and White Ensign.

MR. P. W. SQUIRE, F.C.S., F.L.S., informs us that new editions of both Squire's "Pocket Companion" and Squire's "Companion to the British Pharmacopœia" are in course of preparation. The smaller book (the "Pocket Companion") contains such items of information as are of special interest to prescribers and dispensers; it will be brought into conformity with the British Pharmacopœia, 1914, and will indicate the changes which have taken place in the preparations. The chemical tests are not dealt with. It is now in the press, and it is expected to be ready some time in January. The larger volume, Squire's "Companion to the British Pharmacopœia," covers a much wider field, and, although the method of revising it is continuous and systematic, and greatly simplifies the labour of dealing with the new issue of the official volume, there are still many new developments which require mature consideration before criticism can be included in a book of such a standard nature. Besides the changes consequent on the new official publication, the "Companion" will contain much new matter, the result of investigations carried out in the author's laboratories during the past six years. It is anticipated that the book will be ready later in the year.

"ENZYMOL" is a purified solution of the proteolytic enzyme of fresh gastric juice, which was originally introduced by Messrs. Fairchild Bros. & Foster, New York and London, in 1895, as a topical application for indolent ulcers and other external disorders which do not heal under ordinary antiseptic treatment. During its twenty years' use a mass of clinical experience has been gathered which proves its effectual resolvent character. At the present time, when Army surgeons have exceptional difficulty in the treatment of gangrene and bone necrosis, the following brief notes of cases are of exceptional interest:

Necrosis, Bones of Leg.—In a case of necrosed bones of leg, a solution of Enzymol was injected into the sinuses, and did "splendid work in digesting away all the affected bone." The patient, a man, made good recovery.

Gangrene after Operation.—The patient, a physician, was operated on for some abdominal trouble. He was diabetic, and after operation developed gangrene. Applications of Enzymol were used, and some time later a second operation was performed, dressings of Enzymol being used exclusively. The patient recovered and was able to resume practice.

"Enzymol" is equally effective in pus cases, and generally as a surgical solvent. Interesting literature in regard to it may be obtained free on application to Messrs. Fairchild Bros. & Foster, 64-65 Holborn Viaduct, London, E.C., and the "Enzymol" itself in 4-oz. bottles from Messrs. Burroughs Wellcome & Co., Snow Hill, E.C., the agents for Europe, Asia, Africa, and Australasia.

India and the East.

(From the "C. & D." Correspondents.)

NEW COMPANY.—The Punjab Pharmaceutical Works, Ltd., of Gowalmandi Road, Lahore, has been floated as a private company, with a capital of Rs. 20,000, divided into 200 shares of Rs. 100 each. The first directors are Tehl Singh, M.B., D.P.H., etc., Karam Singh, L.R.C.P., etc., and T. S. Mahal, managing director.

Oil-seeds.—The Bengal Chamber of Commerce has telegraphed to the Government of India strongly supporting a recommendation of the Karachi Chamber of Commerce in favour of the decrease of the area to be placed under oil-seeds, and the increase in that under wheat and other food-grain crops in India to meet the abnormal requirements of the European markets as created by the war.

APPRECIATION.—A Multan subscriber, in wishing us the compliments of the season, reports that, although it is wartime, he has regularly received his copy of THE CHEMIST AND DRUGGIST, and finds it "very good company." Business continues brisk in the Cantonment, although socially the season has been dull in the absence of the garrison. Devonshire Territorials have, however, taken their place, and upon their arrival they had a splendid reception, especially from the Indian troops, who remarked upon their fine soldierly bearing. There are several chemists' assistants among the Territorials, who were surprised at the up-to-date and English appearance of the pharmacies. Some 250 families of those who left for the Front are making a temporary sojourn at Multan prior to leaving for England.—Mr. Lang, representative of Southall Bros. & Barclay, Ltd., was in Multan on November 24.

DRUG SHORTAGE IN CEYLON.—There is a scarcity of drugs in Ceylon, occasioned by the European War, and great care is being exercised by the Ceylon Government in regard to their distribution to estate dispensaries. In explaining the matter to a representative of the "Ceylon Observer," Sir Allan Perry said that fully adequate supplies of drugs, surgical bandages, etc., indented for several months ago, had not been forthcoming owing to the prohibition by Great Britain. Moreover, large quantities of drugs and bandages destined for Ceylon were lost in vessels sunk by the *Enden*. It is particularly difficult to obtain surgical bandages, and quite recently it has been necessary to a certain extent to fall back upon ordinary linen. It must be admitted, added Sir Allan Perry, that there is an enormous waste of drugs on estates where the apothecaries are not fully qualified men. With the object, therefore, of conserving the available supply and, at the same time, of retrenching, it has been found necessary temporarily to suspend compliance with intermediate requisitions for drugs (except for quinine and opium). The drugs drawn half-yearly should be adequate to last for six months, and the idea is that dispensers should be made to realise the importance of economy in their use. In some cases a month or so after the half-yearly supply has been drawn intermediate requisitions are sent in. Where many of the drugs go it is difficult to know; it does not seem likely that all can be consumed by the coolies.

Winter Session

c^o Meetings of Trade Associations.

(See also "Insurance Act Dispensing.")

Chemists' Dental Society. A meeting of the General Purposes Committee was held at the Holborn Restaurant, London, W.C., on December 29. The President (Mr. Templar Malins) was in the chair, and there were also present Mr. Kenneth Nixon (Vice-President), Mr. J. H. Tasker, Mr. J. Hearle, Mr. J. W. Roberts (Treasurer), and Mr. Benson Harries (Secretary). The principal business was the discussion of the scheme for insuring members against legal actions, and a representative of the insurance company was present to explain the advantages offered. The scheme was adopted for the coming year. The arrangements for the annual meeting were considered, and it was decided to hold this during the time of the Chemists' Exhibition in May, or otherwise in April. Mr. Harries promised to give a concise statement of the position of the Society at that time before he gives up the Secretariatehip.

Edinburgh.—A meeting of the Edinburgh District Chemists' Trade Association was held at 36 York Place, Edinburgh, on December 23, Mr. Adam Duncan (President) in the chair. The opening address of the President was taken up with a review of the work of the past year. In regard to the *Recognition of Pharmacists* under the National Insurance Acts, he referred to the establishment of Pharmaceutical Committees, which have done much to place pharmacists on the same level as medical men. These principles having been conceded, it remains for chemists to see that they are carried out in Scotland as in England and Wales. He contended that the representation of medical men on Insurance Committees is disproportionate, and that this inequality should be amended. Pharmacists should be represented on all bodies dealing with the administration of Medical Benefit. The Association would be wise to consider beforehand and prepare a case supported by reliable evidence for placing pharmaceutical service on a satisfactory footing. *The New Drug Tariff* is an improvement on the old one, especially as there is provision for a monthly adjustment of prices in the case of drugs the price of which is affected by the war. The question of discounting is in abeyance for the present, but the Central Checking Bureau will better control prescribing and dispensing, and perhaps remove the risk of discounting. The President also referred to the *Weekly Half-holiday*, which has worked well. There still remains the question of shorter hours, and the time is opportune for taking this into consideration. The changes in the *British Pharmacopœia*, 1914, were also mentioned, and the doubts which may arise as to the intention of the prescriber in the case, for example, of tincture of straphanthus. Another practical difficulty will be the changed standard for tincture of opium or laudanum, which brings it within the First Schedule of Poisons. Apparently it will need to be sold under all the restrictions of Section 17 of the Pharmacy Act, 1868, as regards registration and selling only to a person known to the seller. An alternative, which seems to be quite competent [?—ED.], is to regard it as a medicine dispensed by a registered chemist, and entered in a book kept for the purpose with the name of the person to whom it is sold. Another plan, not free from objection, would be to supply the laudanum of the British Pharmacopœia, 1898, with an explanation to the purchaser as to what is being supplied. The frequent sale of penn-worths makes the matter a difficulty. If the Section 17 restrictions on First Schedule poisons are insisted on, it may, as in the case of solution of morphia, stop the sale of laudanum in small quantities. The European War has raised questions that may need careful attention. The fluctuation of prices in many drugs creates difficulty as to prices generally in ordinary retail business. There is also the stoppage of supplies in some cases. As far as synthetic drugs from German sources are concerned, which are put on the market under protected proprietary names, it may safely be said the complete stoppage of supplies is no great loss either to medicine or to pharmacy. There is good reason to suspect that not infrequently these compounds were boomed without good cause to bolster up some other industry, and we are glad to be rid of them. A vote of thanks was awarded to the President for his address, after which Mr. Peter Boa (Chairman of the Pharmaceutical Committee) gave a *résumé* of the work of that Committee during the past year. Mr. Boa paid a generous tribute to the energy and tact which Mr. Muir, the Secretary, employs in his work. A vote of thanks was awarded to Mr. Boa for his address.

Scientific Progress.

Temperatures under this heading are on the Centigrade scale.

A New Oil-seed.—E. M. Jason ("Kew Bull." No. 9, 1914, p. 333) gives a description and analytical constants of a concrete oil obtained from the seeds of a South American plant, *Ostcophloem platyspermum*, Warb. (*Myristica platyspermum*, Spruce), N.O. *Myristicaceae*, a shipment of which was recently received at Liverpool. From the kernels 55.2 per cent. of white concrete fat was obtained by extraction with petroleum ether. It possesses a very slight odour, and has the following analytical constants: Melting-point, 43°; solidifying-point, 39°; saponification-value, 240.2; free fatty acid (as oleic acid), 5.3 per cent.; iodine-value (Wij's), 6.3; refractive index at 40° (Zeiss butyro-refractometer), 36.9.

Methyl Alcohol in Spirituous Liquids.—Vivario ("J. Pharm. Chim." 10, 1914, p. 145) gives the following process for detecting methyl alcohol: The alcoholic liquid is distilled over anhydrous sodium carbonate, and 30 grams of the distillate (80-per-cent. alcoholic strength) is boiled under a reflux condenser for seven hours with 15 grams of potassium hydroxide and 1 gram of hydroxylamine hydrochloride. The liquid is well diluted, acidified with sulphuric acid, and distilled in a current of steam. When methyl alcohol or compounds which yield it on boiling with alkali are present, the distillate contains hydrocyanic acid. Five per cent. of methyl alcohol in ethyl alcohol can be detected in this manner. It is necessary that furfural should first be removed by treatment with aniline phosphate or meta-phenylenediamine hydrochloride.

Valuation of Cod-liver Oil Emulsions.—Accurate determination of fat (not of cod-liver oil) is only given by the Soxhlet extraction; all other methods are inexact. With regard to the nutritive physiological value of cod-liver-oil emulsions, the principal factors are the content of oil, the quality of the oil, and the method of preparation. By the quality of the oil is understood, besides the physical properties required by the Pharmacopœia, especially constituents such as albumen, lecithin, cholesterol, and the more or less decomposed amines, varying from 1.5 to 5 per cent. Physiological digestion-tests have shown that these constituents are as important to the oil as a small proportion of pepsin is to pepsin-wine. To anyone interested in the determination and valuation of cod-liver oil the unique work "Cod-liver Oil and its Chemistry," by F. Peekel Möller, is recommended.

Oil of Abies concolor.—Schorger ("Jour. Ind. and Engin. Chem." 1914, 6, 809) has examined the oil distilled from the leaves and twigs of the white fir, *Abies concolor*. The yield of oil from the leaves varied from 0.029 to 0.0272 per cent. The oil possesses the following characters:

Sp gr.	...	...	0.872 to 0.877
Refractive index (at 15°)	...	...	1.4781 to 1.4796
Optical rotation	...	...	20.11° to 27.94°
Acid-value	...	...	1.01 to 1.81
Ester-value	...	...	12.52 to 27.34

The bark yielded 0.1 per cent. of oil having similar characters, except that the ester value falls between 6.43 and 6.88. The approximate compositions of the oils are as follows:

	LEAF OIL.	Twig OIL.
Furfural	...	Trace
<i>l</i> -pinene	...	12 per cent.
<i>l</i> -camphene	...	8 "
<i>l</i> - β -pinene	...	42 "
<i>l</i> -phellandrene	...	15 "
Dipentene	...	—
Esters (bornyl acetate)	6.5 per cent.	12 to 13 per cent.
Free borneol	9.5 "	4.5 "
A green oil	3 "	5 "

Volatile Oil of Barosma venusta.—Investigation of the constituents and properties of this oil by E. Goulding and O. D. Roberts ("Jour. Chem. Soc.", 1914, 2613) have shown that it differs markedly in odour and composition from that of the official buchu-leaves, and that it does not contain diosphenol. The results obtained by the authors indicate approximately the following composition: Hydrocarbons (chiefly myrcene), 43.0; aldehydes (chiefly anisaldehyde), 0.5; phenols, 0.2; phenol ethers, methyl-chavicol, 21.4. alcohols, partly linalool (calculated as $C_{10}H_{18}OH$), 14.3; esters (calculated as $C_{10}H_{18}OAc$), 2.2; sesquiterpenes loss, etc. (by difference), 18.4. A consignment of the leaves forwarded from South Africa furnished 2 per cent. of volatile oil with the following constants: D₁₅, 0.865; α_{D}^{20} in 100-mm. tube, +0.47°; acid-value, 5.6; ester-value, 6.22 (corresponding to 2.2 per cent. of esters as $C_{10}H_{18}OAc$); ester-value after acetylation, 55 (corresponding to 15.7 per

cent. of total alcohols, or 14.3 per cent. of free alcohols and 2.2 per cent. of esters).

Estimation of Antipyrin.—W. O. Emery and S. Palkin ("Journal Indust. and Engin. Chem." 1914, 6, p. 751) give the following process: A quantity of the sample containing not more than 0.25 gram of antipyrin is shaken with 20 c.c. of water, 5 c.c. of alcohol-free chloroform, 0.5 gram of sodium bicarbonate, and a slight excess of iodine solution. After an interval the excess of iodine is removed by a few drops of sodium-thiosulphate solution and the iodo-antipyrin shaken out with chloroform. The chloroformic solution is washed with water, filtered, evaporated in a weighed flask, and the residue weighed. The weight of the residue multiplied by 0.5992 gives the quantity of antipyrin present. When phenacetin, sulphonial, or similar substances are present a weighed portion of the sample is shaken with 50 c.c. of water, 20 c.c. of concentrated hydrochloric acid, and an excess of iodine solution. After some hours the liquid is decanted through a glass-wool filter, the tarry residue washed with 5 per cent. hydrochloric acid, dissolved in about 50 c.c. of methyl alcohol (free from ethyl alcohol and acetone), the solution treated with 50 c.c. of water and sodium hydrogen carbonate, the excess of iodine removed by thiosulphate, and the iodo-antipyrin extracted with chloroform.



Postal Address:

C. & D. INFORMATION DEPARTMENT, 42 Cannon Street, London, E.C.
Telegraphic Address: "CHEMUS, CANNON, LONDON" (two words).
Telephone Number: 3617 CENTRAL (three lines).

INFORMATION WANTED.

Postal or telephone information with respect to makers or first-hand suppliers of the undermentioned articles will be appreciated. Please address us as above:

209/63. Venzonial.	211/36. Eucaine hydrochloride: suppliers in United Kingdom.
211/24. Dr. Mackenzie's tonic bath-tablets.	211/35. Digitalin: suppliers in United Kingdom.
208/12. Maravilla Curat (Hum-phrey).	211/44. "Luxfone" for the face.
208/120. Ixadama.	211/47. Nantwich bath-salts.
209/14. Small glass balls for use with smelling-salts.	136/36. Salacetol: suppliers in United Kingdom.
210/10. Malt Diastase, British makers.	138/7. Salvarsan and neo salvarsan: suppliers in United Kingdom.

INFORMATION SUPPLIED.

Inquiries regarding the following articles have been answered. The information as to supply will be given to others who send a stamped, addressed envelope to the Information Department, THE CHEMIST AND DRUGGIST, 42 Cannon Street, London, E.C.:

Aluminium measures, 210/11	Orange-sticks, 210/32
Cachet machinery (French makers), 208/46	Pepette for bacteriological work, 210/70
Cachets (French makers), 208/72	"Phenoloid" disinfectant, 205/24
Cochrane's ticket ink, 208/18	Phosphate of ammonia, free from arsenic, 209/13
Cocoa, milk, and sugar tablets, 201/302	"Premier" syrup of figs, 191/12
Copper sulphate points, 202/12	Priece's Macassar oil, 196/73
"Devonshire Violets" toilet specialties, 199/53	"Prophylactic" feeders, 125/61, 148/9
Digena tea, 200/19	Pynozone, 190/8
Dr. Roger's "Tycos" sphygmomanometer, 203/4	Pyrogalllic acid, 185/50
Equifex disinfector, 211/45	"Record" syringes, 163/10
"Fairy" soap, 198/48	Refills for pocket lamps, etc., 211/48
Formaldehyde, 210/32	Resorcinphthalain, 195/54
"Fenof," 208/28	Rexall remedies (London agents), 201/305, 205/43
Gamburg's perfumed pumice-stone, 201/306	Roger's nursery hair-lotion, 207/16
Glass syringes, 210/32 and 200/413	"Rumox" veterinary preparation, 201/303
Glass tubing, 203/210	Sodium hyposulphite, 208/52
Grant & Cie.'s buttermilk soap, 209/64	"Solignum," 203/42
Grease-proof cardboard boxes, 201/20	Surgical enameled ironware marked "K.E.R. Sweden," 211/46
"Kultivus" hair-dye, 201/9	Uveanite tips (for nasal douches), 210/55
Laxaline, 201/900	Zinc ointment (small tins), 203/440
Laxative bromo quinine tablets, 198/47	
Mayzone preparations, 211/21	

Observations and Reflections.

By Xrayser II.

"The C. & D. Diary" for 1915

shows no falling-off in interest and importance; indeed, in some respects it lays us under a deeper obligation than usual. The old familiar features are still there, the law section a little condensed, the lists of names a little lengthened. I am particularly glad to note that during the last two years the number of local Associations has increased from 182 to 229—a most hopeful sign of a livelier general interest in the craft, and a substantial approach towards that complete organisation we all desire. But the outstanding feature of the *Diary* is the treatise on the new B.P., which alone is sufficient to give this year's issue pre-eminence over its forerunners. Without being in the least captious, your criticism of the book is thorough and searching; praise is given where it is due, the chemical monographs, for instance, are declared to "set up a standard in pharmacopeial chemistry which places the B.P. 1914, in this respect, far in front of all other Pharmacopæias, past or present"; but grave fault is found, at least by implication, with some of the *materia medica* monographs, ambiguities and vaguenesses of description being pointed out which may easily lead to awkward differences in practice. This is very valuable criticism; and the whole treatise, taken in conjunction with your previous articles on the subject, should place the pharmacist at once in touch with the new work.

"Business as Usual"

is one's first thought in glancing at the 427 pages of advertisements in this *Diary* of the war year, and the last when one has looked through them. There is little evidence here of declining trade, and none at all of diminished energy in its pursuit. The index to advertisers occupies virtually the same space as usual, the slight difference being due to the enforced absence of some German firms. The number of German names that remain is, however, remarkable as evidence of the extent to which commerce tends to blend peoples with each other, and so gradually to break down the barriers of nationality. The process may be slow, but so are all the processes of nature, yet it goes on steadily, and will ultimately bring about such an international comity as is the best assurance of peace. I have counted the names in this index which are undoubtedly of German origin, and comparatively new in this country, and I think anyone who does so will be surprised, as I have been, to find how much our pharmacy owes to these sometime foreigners. This remark applies to others besides Germans, and it is a matter for congratulation. There was a time when trade guilds were formed largely for the purpose of keeping foreign traders from settling among us, but the folly of such a policy has long been apparent. The more industrious foreigners settle among us the better; their doing so is not only a tribute to our national character, but it brings new blood to renew our vigour and more trade to our shores.

The Aeroplane is the Herald Angel

of the new gospel of German Kultur, and the fact that on Christmas Day one or more could be seen hovering over Dartford has perhaps a special significance. It may, of course, have been a mere coincidence, and probably it was, but possibly salvarsan is regarded in Germany as a munition of war, and its English manufacturers as being, therefore, fair objects of attack. Our enemies are indeed not at all scrupulous as to whom they attack, and my suggestion is in a sense supererogatory. Clearly, however, our new determination to produce our own pharmaceutical chemicals is deeply resented in Germany, and the depth of that resentment is the measure of the necessity we are under to persevere in this enterprise. There is something to be said in apology for this

"Great National Humiliation."

We have no doubt been short-sighted in divorcing, to the extent we have done, commerce from production, but our national genius is partly the explanation, and our geographical position, which makes England the exchange and mart of the world, has tended to exaggerate this natural bent. It is not always easy to give equal consideration to two different branches of industry, and in our preoccupation with mere trade we have neglected some of the manufactures of which we are really as capable as any other people. We must correct this fault, and every individual pharmacist, by an increased interest in the source and genesis of the drugs he handles, and by giving preference, whenever practicable, to home manufactures, may do something towards wiping off the disgrace Lord Moulton charges upon us. Our wholesale houses, too, will do well to keep themselves more closely in touch with the pioneers of research than some of them have done.

The Greatest Surprise

of the hideous conditions in which Europe now finds itself is the small extent, in area as well as in intensity, of the financial privations of those who are more or less affected by the war. From practically all parts of the country come reports of less unemployment, less poverty, and greater Christmas buying in the shops than has been experienced for years. It seems also from your German news that a somewhat similar state of things prevails among our enemies, for if the German sick funds "have not been so unfavourably influenced by the war as was anticipated" we may take it that in that country there is not the extreme privation that might reasonably have been expected after five months of war and a complete stoppage of maritime trade. After all, when one considers that more than

A Million Pounds per Day

is flung into circulation with a lavish and often, it is to be feared, an indiscriminating hand, there must be large numbers of people enjoying comparative wealth who formerly were on the border-line of poverty, not to speak of the present abnormal demand for unskilled labour. A survey of the whole situation impels me to say that the generous instincts of pharmacists who dispense medicines and supply goods to soldiers' and sailors' dependants at cost price, have been quite needlessly exploited and drawn upon. I ventured at the time to put in a plea for longer consideration, and even advanced the idea that there was no necessity for any such sacrifice; but the good patriots who were rushing the scheme knew that they themselves had little or nothing to lose, and they would not be said nay. I wonder what the struggling pharmacists in poor neighbourhoods are saying about it now when they see the "dependants" with more money to spend than they ever had before, and spending it, too, in ways that, to say the least, seem less likely to benefit the spender than if it were diverted into the till of the pharmacist.

The Revival of the Kelp-industry

may be one of the indirect blessings of the war. Very little has been said about kelp in recent times, but quite likely next year's textbooks may once more tell all about the industry with which, as a student, I was familiar many years ago. Supposing the industry is resuscitated, how long is it going to continue after the war is over? This is one of the questions that lie on the knees of the gods. We seem all to be making up our minds that now is the time to embark on schemes of State socialism, and as potash and iodine are just as essential as aniline dyes to the welfare of the Empire, there is no reason why the nation should not go shares in the task of once more setting kelp on its legs.

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PHARMACEUTICAL FORMULAS. (9th Edition, 1914.) 10/- by Post 10/6.

ART OF DISPENSING. (9th Edition.) 580 pages, 6/-, by Post 6/4.

VETERINARY COUNTER PRACTICE. 4/-, by Post 4/4.

ELEMENTARY DISPENSING PRACTICE. 3/6, by Post 3/9.

DISEASES AND REMEDIES. (4th Edition.) 3/-, by Post 3/3.

PRACTICAL METHODS OF URINE ANALYSIS. 2/6, by Post 2/9.

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Editorial Articles.

The New Year.

"A guid new year tae aye an' a',
An' mony may ye see."

THE sentiment is the universal desire of all who owe allegiance to the British Crown, wherever they be. "A Good Year" may 1915 be. We know as we enter it that it is fatal to a world out of joint, and that every one of us has some sacrifice to make for the Old Country and the Empire, but we are united in determination to do everything that lies in our power to maintain the freedom which is our ancient heritage, and to share the benefits with others irrespective of creed and race. We have every reason to be gratified with the results of the war which Germany began against other European Powers in the last days of July. Her expressed intention of polishing off France, then Russia, was to lead up to the conquest of Britain, and that accomplished the western hemisphere would have been next on the list, for "Peace on earth" meant to the Kaiser peace in a universal Germanic dominion. After five months of such warfare as the world has never before seen, and for which Germany alone was ready and ripe, we see that her plans have utterly failed. Her efforts have, so far as we are concerned, simply cemented the integral parts of the British Empire more firmly than they have ever been before, and have knit together for self-protection against a cruel and relentless enemy six nations of the Old World. The year 1914 closes better and happier than many people thought it would. We Britons had little right to expect this: our Army was numerically small, but in quality far from contemptible. Quality tells, it did in this instance, and Belgians, British, and French have vied with each other in courage and endurance. These qualities will not fail us in the New Year, and it is for us who remain at our customary pursuits to continue the confidence, patience, and support which have meant so much to our Army and Navy, and which have contributed to our commercial and financial stability during the past five months. The business of pharmacy has shared in that stability. Those who have not relaxed their efforts have suffered little. The "Business as Usual" maxim has paid, particularly in the retail drug-trade. Two months ago we said, "We are approaching the season of peace and good will, when, whatever the condition of the world at large may be, in the homes of these islands Christmas cheer will prevail.... This is the spirit with which chemists should face Christmas, for the British people will so approach it, and gifts both small and large will be bought." We hear from various parts that retail chemists who lacked the confidence and made no special preparation for Christmas trade have reasons to regret

it, while those who were ready for the rush have scored. We are also pleased to note that our own pages have reflected the customary character in Christmas and New Year's greetings to the trade from merchants and manufacturers. The following is a list of those who have in this manner shown that business as usual, even better business, will be the lead for 1915, and that they aim to contribute to it:

Allen & Hanburys, Ltd.
Stafford Allen & Sons, Ltd.
J. C. Arnfield & Sons, Ltd.
Baiss Bros. & Stevenson,
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Arthur Berton, Ltd.
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Ltd.
Northern College of Pharmacy.
Orridge & Co.
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Paine & Co., Ltd.
Potter & Clarke, Ltd.
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Sangers.
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British Pharmacopœia, 1914.

EVERY time a new British Pharmacopœia is published there arise knotty problems as to when the work really comes into force, and as to the effect on the copyright of allowing access to the work by the public before the book is published. We refer in a previous article in this issue to the steps which the General Medical Council are required to take before the work comes legally in force in the United Kingdom. The "London Gazette" is ordinarily published twice weekly—Tuesday and Friday—and this time the statutory "Gazette" notice is to appear in the issue of January 1, twenty-four hours after the work is actually published—that is, as soon as it is sold to the public, and copies could be purchased on December 31. What effect this will have upon the copyright is not known, but there can, we think, be no doubt that the General Medical Council is secure enough in that regard. The "Gazette" notice which appears on January 1 follows exactly the lines adopted in 1898, but there is an alteration in the name of the printers—this time Butler & Tanner, Frome—and the signature to the notice is that of Mr. Cockington, the Acting Registrar, owing to the absence of the Registrar (Mr. N. C. King) on active service. It follows that on and after Friday, January 1, 1915, the standards of the new Pharmacopœia replace those of the 1898 edition, in so far as they are enforceable by law, and the majority of decided cases under the Sale of Food and Drugs Acts favour application of B.P. standards to articles sold under B.P. names. This applies especially to the dispensing of prescriptions of registered medical practitioners, while under Section 15 of the Pharmacy Act, 1868, it is illegal for persons registered under that Act to "compound any medicines of the British Pharmacopœia except according to the formularies of the said Pharmacopœia." Copies of the new Pharmacopœia were delivered by the

binders on Wednesday, December 30. The book is precisely the same as was circulated in advance. The list of corrigenda referred to in the *C. & D.*, December 19, p. 52, is placed before the title-page, and the index corrigenda between pages 554 and 555. As to the incidence of the new Pharmacopœia we quote a letter which the Liverpool Chemists' Association issued on December 29 to medical practitioners in the city and district:

DEAR SIR,—As you are aware, the British Pharmacopœia 1914 is due to appear on January 1, 1915.

It is important at this juncture that there should be a complete understanding between the medical and pharmaceutical professions, so that, on the one hand, the physician when he prescribes will know what the pharmacist will dispense, and, on the other hand, the pharmacist will know the exact intentions of the prescriber.

Technically, from January 1 the pharmacist should dispense drugs and preparations of the strength indicated by the new Pharmacopœia; but as the publication will only appear on that day, and probably will not reach all concerned for some time after that date, it is impossible for these and other obvious reasons to discontinue the use of the old edition on December 31 and adopt the new edition on the following day.

In order to ensure uniformity of action, the members of the Liverpool Chemists' Association consider it advisable to dispense all prescriptions according to the present Pharmacopœia until March 31, 1915, unless the physician specially indicates to the contrary by noting B.P. 1914 on the top of the prescription or against any particular ingredient or ingredients. After that date it will be understood that the new pharmacopœial preparations are intended, unless otherwise indicated.

Trusting that this will meet with your approval,

We remain, yours faithfully,

H. HUMPHREYS JONES, President.

JOHN H. ROBINSON, Hon. Secretary.

Without an agreement between prescribers and dispensers it is legally binding upon dispensing chemists to use the new B.P. preparations in dispensing prescriptions, as has already been explained.

Laudanum a Part 1 Poison.

WE reported in the Coloured Supplement of our issue last week a coroner's inquiry in the course of which prominence was given to the fact that with the new year laudanum is shifted into Part 1 of the Poison Schedule, owing to the fact that tincture of opium of the new Pharmacopœia (*official synonym*, laudanum) has been increased in potency from 0.7 to 0.8 per cent. of morphine to 1 per cent. of morphine. The initial result of this is to bring the new laudanum within the terms of the Part 1 entry, viz. :

Opium and all preparations or admixtures containing 1 or more per cent. of morphine.

At the time of writing the new British Pharmacopœia has not been gazetted, which is a condition precedent to the standards of a new Pharmacopœia being legally enforceable in accordance with Section 3 of the Medical Council Act, 1862, viz. :

The British Pharmacopœia, when published, shall for all purposes be deemed to be substituted throughout Great Britain and Ireland for the several above-mentioned Pharmacopœias, and any Act of Parliament, Order in Council, or custom relating to any of such last-mentioned Pharmacopœias shall be deemed, after the publication of the British Pharmacopœia, to refer to such Pharmacopœia. Notice in the London, Edinburgh, and Dublin Gazettes to the effect that the British Pharmacopœia has been published shall be deemed sufficient evidence of its publication for the purposes of this Act, and a copy of the said Pharmacopœia printed by such person as may be named in the said notice, or in any other notice published in the said Gazettes, as authorised by the General Council to print the said Pharmacopœia, shall be admitted in evidence as being the Pharmacopœia directed to be published by the above-mentioned Act.

Since attention was called to the increased strength of laudanum in the *C. & D.*, October 3, and subsequent

issues our protest has been widely supported by the drug-trade, but it is understood that in official circles the restricted conditions of sale are favoured; at all events, no heed has been paid to the protests, so that as soon as the new tincture becomes legal laudanum it will be necessary for all Great Britain retailers of it *per se* to conform to the Part 1 conditions for sale by retail as set forth in the *C. & D. Diary*, 1915, p. 408, each sale being entered in the Poison Book. We say *per se* advisedly, because the terms of the schedule entry obviously transfer from Part 1 to Part 2 any admixture of laudanum with other medicine—*e.g.*, household cough-remedies, such as laudanum and peppermint. Obviously these admixtures do not contain 1 per cent. of morphine. It is useful at this juncture to show how articles in the new Pharmacopœia made from opium and its alkaloids fall in the schedule, and we accordingly append a complete list of them :

Part 1.

Codeina.	
Codeinæ phosphas.	
Diamorphinæ hydrochloridum.	
Ext. opii siccum.	
Inject. morphinæ hypoderm.	
Morphine.	
Morphine acetate.	
Morphine hydrochloride.	
Morphine tartrate.	
Opium.	
Pil. plumbi c. opio.	
Pil. saponis co.	
Pulv. ipecac. c. opio.	
Pulv. opii co.	
Tinct. opii.	

Part 2.

Ext. opii liquid.	
Liq. opii.	
Liq. morphinæ acetat.	
Liq. morphinæ hydrochlor.	
Liq. morphinæ tartrat.	
Pil. ipecac. c. scillæ.	
Pil. ipecac. c. urginea.	
Pulv. cretæ aromat. c. opio.	
Pulv. kino co.	
Supp. morphinæ.	
Suppos. plumbi co.	
Syr. codeinæ phosphatis.	
Tr. camphoræ co.	
Tr. chlороf. et morph. co.	
Tr. opii ammon.	
Troch. morphinæ.	
Troch. morph. et ipecac.	
Ung. gallæ c. opio.	
Ung. myrobalani c. opio.	

We may note that the morphine liquors in Part 2 contain 1 per cent. of the *morphine salts*, therefore less than 1 per cent. of morphine. It is possible by legal quibble for pulv. ipecac. co. to be in Part 2, as it is lawful to make it with opium containing 9.5 per cent. of morphine, but the new B.P. says (p. 319), "This powder contains 10 per cent. of opium," and that, if maintained, means a Part 1 poison. There are no official preparations of codeine or diamorphine (the official equivalent of heroin) containing 1 per cent. of these substances, but if there were they would be in Part 2, not Part 1, as the *1 per cent. limitation refers solely to morphine*. These remarks do not apply to Ireland, the Channel Islands, or the Isle of Man, but they apply to New South Wales, New Zealand, Queensland, Tasmania, and Victoria. It is still lawful to sell laudanum of the 1898 Pharmacopœia, provided the purchaser is as cognisant of the nature of the article sold as is the seller. The increased price of the new laudanum will give sellers the first opportunity of ascertaining whether regular customers want the old or the new, and if some definite agreement for the supply of the old is come to with such customers it will be quite in order to continue to supply them with the 1898 B.P. article. A note like the following will serve the purpose :

Mr. Blank, chemist, Blanktown.—

Please continue to supply me with laudanum of the British Pharmacopœia, 1898.

Date.

Signature of purchaser.

The general use of such notes is not necessary or desirable; but there are cases in which it is desirable to have a general agreement of the kind for the purpose of avoiding a like formality at each sale. In strict law the old laudanum should be labelled "Laudanum, B.P. 1898," but this alone does not protect the seller; the purchaser, as

well as the seller, must know that fact, otherwise the seller makes himself liable to prosecution under the Sale of Food and Drugs Acts and the Merchandise Marks Acts. Under the latter "laudanum" is a false trade-description when applied to any preparation other than tincture of opium, B.P. 1914, as soon as that authority is legally binding.

The Aspirin Trade-mark.

THE compilers of the British Pharmacopœia 1914 appear to have acted wisely in not devising a short name for acetylsalicylic acid, as there is a probability that within a very short time the word "Aspirin" will be public property. It will be remembered that an application to avoid or suspend the trade-mark "Aspirin" (No. 221,673), registered in the name of the Farbenfabriken vormals Friedrich Bayer & Co., was heard at the Patent Office on September 24 (*C. & D.*, September 26, p. 448) under the Patents, Designs, and Trade-marks (Temporary Rules) Act, 1914. At the hearing it was pointed out that the same word "Aspirin" is on the register (No. 322,523) in the name of the Bayer Co., Ltd., but applicants' solicitor thought it would be sufficient if his clients were given the use of the mark belonging to the German company. We are informed, although no official announcement has been made publicly, that the Board of Trade has decided to avoid the trade-mark for which application was made. The decision arrived at that the trade-mark is void is probably a sequel to the patent-case in 1905, when it was decided that the aspirin patent was invalid. As the substance made under the patent was known as aspirin, the word became public property as well, the only question being whether a user might not be established. The reason why no action has been taken under the ordinary law for the removal of the word from the register is probably because of the prohibitive cost, but, as it turns out, the Patents Act referred to above provides a comparatively inexpensive method of removing trade-marks which should not be on the register and which are registered in the name of alien enemies, as has already been done in the case of lysol, metol, and glycin. It should be pointed out, however, that the trade mark (No. 322,523) registered in the name of the Bayer Co., Ltd., London, remains on the register, because in that case no application was made to have it removed, and it has not been decided whether the Board of Trade has power to order its removal. An anomalous position is thus revealed, which, however, can hardly affect the issue in the long-run. If the public has the right to use the trade-mark "Aspirin" which is numbered 221,673, there is not much property left in the word "Aspirin" which is numbered 322,523. It is right, however, that we should give publicity to a letter which we have received from Messrs. McKenna & Co., solicitors to the Bayer Co., Ltd., as follows :

"With reference to the decision which we understand the Board of Trade have arrived at to avoid trade-mark No. 221,673, in Class 3, consisting of the word "Aspirin," we beg, on behalf of our clients, the Bayer Co., Ltd., to point out to your readers that this order relates to the registration No. 221,673, which stands in the name of Farbenfabriken vormals Friedrich Bayer & Co., and not to registration No. 322,523, which stands in the name of the Bayer Co., Ltd."

In this connection it may be noted that the avoidance of No. 221,673 *does not apply solely to the applicants*, the Keene Laboratories, *but is general*. The official announcement has doubtless been delayed until the point we have mentioned has been settled, and it may be as well to await this decision before expending

money on labels designating acetylsalicylic acid by the name "aspirin." Some chemists may prefer to sell the product by its chemical name or by a registered trademark of their own to distinguish their goods from those of other manufacturers.

German Pharmaceutical Chemicals.

In our issue of March 14, 1914 (p. 89), we dealt fully with the export trade of the German Empire in chemical and medicinal products. We are now able to give further particulars which have been published in "Die Chemische Industrie" relating to imports into and exports from Germany during 1912 and 1913 :

	1912.		1913.	
	Tons,	1,000 Marks.	Tons,	1,000 Marks.
Imports ...	8,585	4,959	9,527	5,265
	<i>Castor Oil.</i>		<i>Refined Glycerin.</i>	
Imports ...	1,189	1,783	1,107	1,661
Exports ...	3,751	5,381	3,937	5,603
	<i>Potassium, Sodium, and Ammonium Iodide.</i>		<i>Salicylic Acid and Sodium Salicylate; Santonin, Benzoic Acid, and Sodium Benzotate.</i>	
Imports ...	11	212	13	304
Exports ...	143	2,820	160	3,703
	<i>Quinine and Quinine Compounds.</i>		<i>Other Alkaloids and their Compounds.</i>	
Imports ...	62	1,118	69	3,155
Exports ...	1,066	3,082	1,284	4,631
	<i>Pharmaceutical Preparations and the Like.</i>		<i>Medicinal Chemical Products.</i>	
Imports ...	45,003	9,538	40,840	11,107
Exports ...	82,948	5,106	113,021	7,132
	<i>From Switzerland</i>		<i>To Great Britain</i>	
Exports ...	1,984	17,911	2,508	23,019
" Italy	107	644	99	596
" Austria-Hungary	79	1,354	95	1,490
" Russia	287	2,861	390	3,904
" Switzerland	239	2,862	324	4,297
" Japan	72	515	94	747
" Brazil	65	798	69	1,008
" United States of America	103	570	135	693
	99	1,417	101	1,360
	<i>To France</i>		<i>Great Britain</i>	
Exports ...	1,176	14,849	1,291	21,313
" Great Britain	100	1,028	107	1,149
" Austria-Hungary	165	1,381	131	1,884
" Russia	125	2,043	132	3,177
" Japan	232	4,410	297	6,007
" United States of America	72	688	78	872
	137	1,337	97	2,303

These figures show the importance to Germany of the foreign trade in pharmaceutical products, but the 1914 records will undoubtedly show a serious set-back, as practically all fine chemicals are on the list of prohibited exports. We understand, however, that the list is by no means rigidly adhered to, and that there is a growing trade in certain chemicals with neutral countries, including the United States of America. In fact, steamers are being regularly chartered by American houses to take German drugs, chemicals, dyes, etc., from Rotterdam to New York, and during the past month or so considerable quantities have already found their way to that port. Now that the actual shortage has been relieved values have declined all round.

The Newer Botany.

THE breath of life stirring in the dry bones of botany would soon be fanned into a bright flame if books of the type of Dr. G. Haberlandt's "Physiological Plant Anatomy," which covers one section of the subject, were available for the whole field. This work of 700 pages and another fifty pages of bibliographical notes (the latter being

an advance on the usual bibliography) is typical of the new botany of the last decade. Modern botanists are not content with describing and collating points of difference. They are seeking "reasons why" for these, and Dr. Haberlandt is one of the most advanced of this type of scientist, whose life work is in the highest regions of plant-life—namely, in connection with the sensory system of plants. The introduction states that "physiological anatomy is an explanatory science because it sets out to discover the relation between structure and function," and it is difficult to conceive a more explanatory co-ordination of diverse subjects than Dr. Haberlandt has succeeded in doing. Under "Mechanical System" the apparently unlimited variation in the arrangement of strengthening tissues is reduced to comparatively few types embodying mechanical principles which plants discovered long before human beings were capable of finding them out. Similarly under the "Conducting System" during the progressive development of the chapter the principle of the division of labour is shown to be carried out to the greatest extent in those plants which require most rapid transportation of food-supplies. Dr. Haberlandt divides plant-tissues into eleven systems, which are treated likewise on lines of development and co-ordination of physiological function, matters requiring further research being recorded with criticisms free from dogmatism. It is especially in connection with the sensory system that a new field is opened to the general reader by the fine evolutionary pictures of tactile organs, why plants respond to the effect of gravitation, and in the development of special sense organs for the perception of light by some plants. Presumably Dr. Haberlandt considers a detailed discussion of the structure of protoplasm and its administrative functions as belonging to the specialised domain of cytology. Sufficient is given in connection with the position of the cell nucleus and the formation of membranes to show the need for constructive co-ordination of the results yielded so far by the numerous researches on cell-division. In the present work the phenomenon of mitosis is accorded the usual sketchy description. English students are greatly indebted to Mr. Montagu Drummond, of Glasgow University, for his excellent translation of the German work. The 291 figures in the text are an important feature in making more complete a magnificent work which is a credit to Macmillan & Co., Ltd., the publishers, and 25s. may be regarded as a modest price for it.

Dr. Henry Kraemer, Professor of Botany and Pharmacology at the Philadelphia College of Pharmacy, and one of the most prolific writers on botany, has just published a new work, entitled "Applied and Economic Botany," which is especially adapted for pharmaceutical, medical, and technical students, as well as being a reference-book for chemists and analysts. The work covers the department of applied botany as distinct from courses of botany intended for intellectual culture. The importance of the subject is appreciated by those who come in contact with new processes of manufacture, or who have to examine finished material with a view to tracing its natural source. Dr. Kraemer devotes about half this book to the study of cell-contents, forms of cells, and the outer and inner morphology of higher plants, and the facts he presents cover also the most recent researches in regard to their chemical nature. The lower plants which may be found as contaminations of crude materials are not neglected, however. One of the longer chapters deals with the classification of higher plants, and it is illustrated with a number of photographs of plants employed as foods, drugs,

and for other economic purposes. Other noticeable chapters are those on botanical nomenclature, the cultivation of medicinal plants, and on microscopic technique. The book is splendidly illustrated, some of the plates being in colours and very many being half-tone reproductions of photographs from nature. Altogether there are probably 2,000 figures used as illustrations. As regards the text, it is only necessary to add that the author has a concise way of expressing himself, and that with no lack of material he has not been tempted to expand the contents unnecessarily. The book contains over 800 pages, and there is an excellent index. We note that Dr. Kraemer is his own publisher, and he informs us that the price he charges for the work (\$5) represents only the cost of production. It can be had through booksellers, but can also be had direct from the author at 145 North Tenth Street, Philadelphia.

"C. & D." Dose Table and Metric Card.

We have now received delivery of the cards which we have prepared for use in the laboratory, pharmacy, or surgery for the benefit of those who desire to ascertain quickly the new doses of the British Pharmacopoeia, 1914, or to convert the metric terms into the imperial. A large number of copies of the card were sent out on Thursday to those who had ordered them in advance. The card measures 11 in. by 8 in., and is looped to hang up. On one side of it are tables showing (1) the strengths and doses of official preparations which have been altered in potency by the B.P. 1914, and (2) the doses or uses of new articles and preparations. On the reverse of the card are tables of metric conversion factors and equivalences. These show (1) how to convert metric quantities into imperial—*e.g.*, grams and c.c. (or millilitres) into grains (or minimis), drachms, ounces, and pounds; (2) how the reverse can be done, with methods of converting prices by one system into the other. The tables of equivalences form a ready-reckoner. The card is supplied at 2s. 6d. per dozen, or 6d. for two, or 4d. each, post free, and orders, with remittance, should be sent to the Book Department, C. & D., 42 Cannon Street, London, E.C. It is well worth having, for it is really useful, and will last for years.

Medical Students Shortage.

We referred in the *C. & D.*, October 31, 1914, p. 48, to the heavy drop in the number of medical students and the effect this will have upon the number of doctors in the future. Sir Donald MacAlister, President of the General Medical Council, has since obtained from the various medical schools and institutions a complete return of the students in attendance at the present time. Compared with the enrolments in October 1913 the decrease is as follows : First-year students, 56 fewer; second-year students, 237 fewer; third-year students, 237 fewer; fourth-year students, 211 fewer; fifth (and higher) year students, 300 fewer. The aggregate number of medical students now pursuing their curriculum with a view to qualifications is thus about 1,000 smaller than in 1913. Unless many senior students return to their studies within the next few months the result will be that the number of young qualified practitioners added yearly to the ranks of the profession will during the next few years be from 200 to 300 less than before. This is equivalent to a diminution of about 25 per cent. of the average number annually added to the Medical Register on qualification. The number annually removed from the Register by death or otherwise has for some years past been about 800. No

suggestion is made as to the means by which the shortage can be obviated, but it looks as though the time has arrived when more facilities for entering the medical profession should be given, by scholarships or otherwise, to intellectual youths whose parents cannot afford to pay for the expensive training needed for medical students. Some scheme might very well be initiated by the Government in view of the large number of medical men needed for supplying Medical Benefit under the National Insurance Act. The democratising of the medical profession would also do something to neutralise the arrogant spirit which has been so much in evidence of late years among certain classes of medical practitioners.

Coco and Cocoa.

THE confusion between the words coco and cocoa is of long standing. It is supposed to have arisen from the accidental running together in Johnson's "Dictionary" of the articles referring to two different vegetable products. Coco has, in consequence, since often been written cocoa. Cocoa applied to *Theobroma Cacao* is, states Murray, a corruption of cacao, which in the sixteenth to the eighteenth century was also written cacao, and sometimes in the eighteenth century cacao. It is interesting also to note that originally cocoa and cacao were three-syllable words, but the error of spelling coco as cocoa has corrupted the pronunciation of cocoa to coco. The fact that another similar name—coca—is used in pharmacy does not help to simplify matters. The confusion has been referred to before in the *C. & D.*, and is recalled because we have received for review two books issued at the same time by Messrs. Macmillan, one being "The Coco-nut," by E. B. Copeland, and the other "Cocoa," by Dr. C. J. J. van Hall. These are published at 10s. and 14s. respectively, and deal with the cultivation and commercial use of these vegetable products. There has been very little published before in book form on cocoa, and nothing as complete as this work by Dr. van Hall, who, as Director of the Institute of Plant-diseases and Cultures, Buitenzorg, Java, is well qualified for writing on this subject. He has been assisted by experts in certain departments of the work, and the result is that a trustworthy guide has been produced for the planter and dealer in cocoa. The work is well illustrated. Professor Copeland's book on the coco-nut is on similar lines, the subject being treated in the same manner. Colonial readers from whom we not infrequently receive inquiries on the cultivation of vegetable products suited to local climates will be glad to know of these two books.

ORTIZON, a compound of hydrogen peroxide and urea, has been applied with great success by T. Ruhemann ("Deutsche Medizinische Wochenschrift," 1914, No. 45) for disinfecting wounds. In contact with wounds oxygen is developed, and to this the purifying properties of ortizon are due.

MEDICINE STAMP-DUTY.—The following gems are culled from an abstract of the Report of the Select Committee on Patent Medicines, which Consul E. Haldeman Dennison, Dundee, sent to the Department of Commerce, U.S.A.:

An alleged cure for asthma fails to escape duty only because no organ of the body can be named as the particular seat of that ailment. Asthma-cigarettes, however, are not regarded as a preparation to be used or applied externally or internally as a medicine or medicament, and consequently pay no duty, but smelling-salts are dutiable. If the original maker of a well-known medicine for which no proprietary rights are claimed affixes a label recommending its efficacy, he must pay stamp-duty, but a retail chemist may purchase it from him and affix such a label without paying duty.

We need hardly point out to our readers that the statements are pure nonsense.

International Standardisation.

By George P. Forrester, F.C.S.

[This article was communicated by the author before the war, in view of the early publication of a new edition of the British Pharmacopœia. As a British subject resident in Germany, Mr. Forrester is now interned in Ruhleben, near Berlin.]

FOURTEEN new Pharmacopœias have appeared in the twelve years which have elapsed since the Brussels Agreement on the strength of potent drugs was signed, and in all of these the principles laid down have been substantially adopted, although it cannot be said that uniformity in this matter has as yet been attained. In view of Professor Tschirch's suggestion of the creation of an International Pharmacopœia bureau, whose duty it would be to collect and sift all the work done in different countries in order to make it accessible to all interested in the question of pharmacopœial standards, with a view to securing greater uniformity in official drugs and their methods of assay, a comparison of the standards adopted by some countries with regard to potent drugs included in the Brussels Agreement may prove of interest, and they are shown in the following table :

COMPARISON OF PHARMACOPEIAL STRENGTHS OF SOME PREPARATIONS INCLUDED IN THE BRUSSELS AGREEMENT.

	British, 1898	Austrian, 1906	Belgian, 1906	Danish, 1907	Dutch, 1905	French, 1908	German, 1910	Hungarian, 1910	Italian, 1909	Japanese, 1907	Russian, 1911	Spanish, 1905	Swedish, 1908	Swiss, 1908	United States, 1905
Aconite-root	...	n.s.	—	0.8 %	—	n.s.	n.s.	—	n.s.	0.5 %	0.8 %	n.s.	—	0.8 %	0.5 %
Tincture of Aconite	...	n.s.	—	0.05 %	—	0.05 %	0.05 %	n.s.	n.s.	0.05 %	n.s.	0.05 %	0.05 %	0.045 %	0.3 %
Belladonna-leaves	...	n.s.	n.s.	n.s.	n.s.	n.s.	0.3 %	n.s.	n.s.	n.s.	n.s.	0.35 %	n.s.	0.35 %	0.3 %
Extract of Belladonna	...	n.s.	2 %	1.5 %	n.s.	1.15 %	n.s.	1.5 % { 0.91- 1.06 % }	0.5 %	—	1.5 %	n.s.	1.3 %	1.5 %	1.4 %
Tincture of Belladonna	...	—	0.03 %	n.s.	—	n.s.	n.s.	—	n.s.	—	0.035 %	n.s.	—	0.035 %	0.03 %
Hyoscyamus-leaves	...	n.s.	n.s.	n.s.	n.s.	n.s.	0.07 %	n.s.	n.s.	n.s.	0.1 %	n.s.	0.1 %	0.08 %	—
Extract of Hyoscyamus	...	n.s.	0.3 %	0.3 %	n.s.	n.s.	0.5 %	n.s.	0.5 %	0.7 %	0.3 %	n.s.	0.3 %	0.3 %	—
Tincture of Hyoscyamus	...	n.s.	—	n.s.	—	n.s.	n.s.	—	—	—	n.s.	—	—	—	0.007 %
Ipecacuanha-root	...	n.s.	2 %	2 %	n.s.	2 %	2 %	1.99 %	2 %	2 %	1.96 %	2 %	2 %	2 %	1.75 %
Tincture of Ipecacuanha	...	—	0.2 %	0.2 %	—	n.s.	0.194 %	0.2 %	0.2 %	0.19 %	—	n.s.	n.s.	0.2 %	—

(n.s. = Not standardised.)

While definite standards of strength were adopted in the Brussels Agreement with regard to a certain number of drugs and preparations, no agreement was reached in the case of aconite-root, belladonna and hyoscyamus leaves, and the galenical preparations of the latter two drugs. Again, it must be remembered that no methods of assay were agreed upon.

In the case of belladonna and hyoscyamus, several Pharmacopœias require a definite content of alkaloids, and the same applies to their extracts, which, although prepared in accordance with the formula set forth in the agreement, vary very considerably in alkaloidal content in different countries where these are standardised. Thus we find that in the case of extract of belladonna the Italian Pharmacopœia requires a content of 0.5 per cent. of alkaloids, whereas in Austria this preparation is standardised to a content of 2 per cent. Nor is this all, for a number of Pharmacopœias merely prescribe a definite minimum content, while others require exact standardisation. A minimum content of alkaloids, without any limit as regards maximum strength, is adopted by the Dutch, Japanese, and Swedish Pharmacopœias, while the Danish Pharmacopœia does not standardise a single one of the preparations in question. Standardisation to a definite content, and if stronger to be diluted with a prescribed diluent (given in parentheses), is required in Austria (gum acacia), Hungary (dextrin), Germany (liquorice), Belgium, Italy, Russia, Switzerland, and United States (all employ sugar of milk). In the French Pharmacopœia an assay-method is given for extracts of belladonna and hyoscyamus, but no indication of the strength required is given, so that the result of the analysis is merely informative for the pharmacist. The Spanish Pharmacopœia says that ipecacuanha should have a content of 2 per cent. of alkaloids, but gives no method of assay. With regard to ipecacuanha, the Brussels

also included, as far as that is possible with the drugs therein.

Evolution of the Pharmacist.

(Illustrated by Mr. Granville Shaw, Ph.C.)

I.

IN the Neo-Lithic Age, when a tribal chief did rage
With pain in head, or heart, or diaphragm,

He would yell for me to come, while the tribesmen,
stricken dumb, Gazed with awe upon the cryptic anagram

That I'd scratch upon a rock, c'er I mixed up ruc and dock,

And flavoured it with fennel—and goodwill.
Oh! the envy that they felt, as I bartered for a pelt

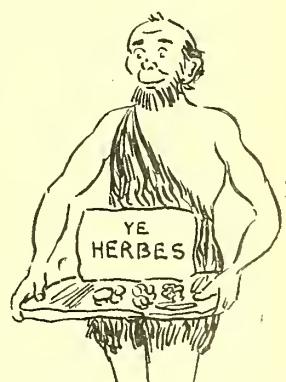
My famous "Fig and Fingerberry Pill."

For the pharmaceutic art was a parcel and a part

Of the dawning of the culture of the world,
And I lit th' ancestral fire for a Beecham and a Squire

Long before the flag of Science was unfurled.
So my brothers far and wide bear yourselves with proper pride,

In that many knotty problems ye have solved
Since the days when, lean and grave, I hawked herbs from cave to cave;
I'm the nucleus from which Pharmacy evolved.



Capturing German Trade : The Need of Research.

By E. Herbert Morris.

IF a calculation could be made of the millions which have accrued to the inventors and exploiters of chemical discoveries, it would make even money-lending look like a sweated industry. In the aggregate, chemistry has added to the resources of the world during the last half-century a capital sum probably sufficient to pay the expenses of the great war. Yet how meagre is the dole annually expended by private enterprise, in Britain, upon prospecting in this boundless area of untapped wealth in search of further gains.

The normal activities of the State for the encouragement of the chemical inventor are considerable. They comprise: Preliminary education, research scholarships, and the protection of the inventor's work by Letters Patent.

Preliminary education in science, including chemistry, cannot be said to suffer any neglect in this country. No fewer than 800 scholarships are awarded annually by the London County Council alone, and these carry a constant stream of recipients to the secondary schools, where well-equipped chemical and physical laboratories await them. This has an important bearing upon chemical research, because it ensures that the attention and interest of a large number of scholars shall be directed towards chemistry at an early age.

Further scholarships are available, which take the successful student to the university, where he has an opportunity of specialising in chemistry if he so desires. True, this educational mill has not hitherto turned out any superabundance of Faradays and Priestleys; nevertheless, it does present an undeniable pathway along which a young man with a particular aptitude for chemical discovery may pass with success.

The third and most valuable inducement held out to the chemical-research worker is undoubtedly the protection of his work by Letters Patent. When it is recalled that the monopoly of an original process can be secured in Great Britain for an initial payment of 4*l.*, it must be admitted that the Government have done their best to place within the reach of all the possibility of securing the full benefit of a new idea.

Unfortunately, in a department of study so highly technical and abstruse as chemistry, original ideas with money-making possibilities do not obtrude themselves any too frequently upon the attention of the average student. The successful inventor must possess not only imaginative and creative ability of a high order, but also a fairly wide acquaintance with the facts already discovered, before he can hope to contribute anything epoch-making to the store of human knowledge. Above all, his suggestions must be practical, and that is why the works department of a business firm is really a much better *mise-en-scène* for discoveries in applied chemistry than either academic groves or Government laboratories can ever be.

The problem of the future is to attract these "scarce brains," and enlist them in the service of chemical-industry. It is a problem which British capitalists, with a few honourable exceptions, have steadily ignored. A young chemist who "scorns delights and lives laborious days" in order to make himself familiar with some special department of his chosen science, demands something more than a living wage if his best energies are to be elicited for the task. In addition to facilities for work the necessary incentive to effort must be provided. It is in this respect that German arrangements have been superior to ours. In Germany a young man of suitable chemical attainments is taken into a firm at a salary of about 100*l.*. a year for research-work. He can look forward, however, if his labours are successful, to a very rapid rise to a position of affluence and authority. Royalties are offered on any patents which are utilised, and a seat on the board of directors is not beyond the

reach of the successful inventor of a new chemical combination of real commercial importance.

The actual working directors of most of the great German chemical firms are, in fact, chemists of distinction, who have thus won their way to the front by dint of their individual achievements in the adaptation of science to the improvement of technical processes. Such a condition of things makes for efficiency in all grades.

In Britain the rewards offered to research chemists are, as a rule, lamentably insufficient, and until something is done to alter this state of affairs, it is to be feared that even "after the war," British chemical-industry will continue to lag far behind its Continental rivals. Neither the inventor nor the capitalist can make rapid progress in this field of effort alone. Both are needed. On the one hand the new thought with its latent potentialities, is necessary; on the other, business organisation, the ready channels for marketing the product, the capital for an advertising campaign, and in general the patience and faith in the future to take risks in a new venture.

Both sides, therefore, should be adequately rewarded.

We have plenty of gifted chemists among us, and we are credited with being certainly one of the richest nations on earth. The requisite elements are present, and it will be a standing reproach to British business acumen and to British enterprise, if at this juncture no united effort is made to recover our lost heritage of supremacy as the chemical-manufacturers of the world.

War Wants and Worries.

By "Allan."

I.

A few days before the end of July we received a consignment of sugar, which was not required and which we did not expect until a month later. As subsequent events were to show, this mistake on the part of our wholesale house was for us a lucky one. There were few indeed who believed that war would actually be declared. It seemed so utterly inconceivable. The dreaded news came on the Sunday morning. Next day people were rushing panic-stricken for provisions. Our business transactions were strictly normal. We hoped that they would remain so. The first disillusionment was the arrival of a much-diminished supply of a drug contracted for a few days before by a German firm. The contract was cancelled and the price doubled. Insult was added to injury by the peremptory demand for immediate payment. We have bought drugs and chemicals from this firm since they made their *debut* among the pharmacists of this country. Under the circumstances they naturally must be excused.

When the selfish people were well provisioned they turned their attention to goods they would require from the pharmacist. Foremost among the most important babies of the city were those whose father was a Doctor of Divinity. The postman told us that ours was the only firm in the street at present receiving invoices. "No fear of the war spoiling the chemist's business," he added. We were rather dubious, but hopeful.

From time to time business is suspended while we at the window await the passing of yet another battalion of men whose approach is heralded by the rousing skirl of the bagpipes and the steady tramp of many feet. Their destination is—who can tell?

Everyone seems anxious to learn ambulance-work. Clinical thermometers are in great demand, as are also the various bandages. Fussy old ladies, who seemed to consider themselves of inestimable value to the State, some time ago entered the shop. Their needs were simple—some bandages of a well-known type. Unfortunately we were sold out. In their stead we were selling imitations at 9*d.* each (the price of the former was 6*d.*). The patriotism of these dames snapped at such an imposition. "It's only sateen," sniffed one; "6*d.* a yard; I refuse to pay more than 6*d.*" They left, needless to say, without making a purchase.

Medical Gleanings.

Bismuthated Liquid Paraffin.

A. VICARIO ("Jour. Pharm. Chim." 1914, 9, p. 458) states that the unpleasant after-effects of large doses of bismuth subnitrate due to the formation of nitrites, as well as those due to the solubility of bismuth oxide and carbonate in dilute acids, may be avoided by administering those drugs intimately triturated with liquid paraffin. Bismuth carbonate intimately mixed with liquid paraffin is not attacked even by concentrated hydrochloric acid.

The Effects of Eye-strain.

MR. C. ERNEST PRONGER, F.R.C.S., has a paper in "The Lancet" (1914, II., p. 1356) devoted to insomnia, in which several instances are given of insomnia due to eye-strain. The treatment consisted in correcting the visual defects, the good results being speedily manifest. Some of the letters from patients, which are given in the article in question, express gratitude in the most pronounced terms, and show the importance of the sight-testing optician's work.

Treatment of Pruritus Ani.

DR. W. F. SOMERVILLE recommends ("B.M.J." 1914, II., 420) the local application of high-frequency currents as a means of giving speedy and permanent relief in this ailment. If this treatment is not available, he suggests that an ointment containing 80 grains of calomel, 40 grains of camphor, and 20 grains of quinine to the ounce will probably remove the anal irritation. An evacuation at bedtime and scrupulous cleanliness after stool would assist in obtaining a cure.

Glycosuria.

DR. A. F. DIMMOCK ("B.M.J." 1914, II., 399) gives the following simple method for the determination of the amount of glucose in diabetic urine and other liquids:

To 20 c.c. of the urine, diluted twenty times with distilled water, 10 c.e. of a filtered solution of potassium carbonate (1 in 4) is added, and this is boiled carefully for three minutes, cooled, and made up to, say, 50 or 100 c.e. with distilled water. A solution of pure glucose is prepared, 1 gram in 200 c.e. of distilled water; 20 c.e. of this and 10 c.e. of the potassium-carbonate solution are boiled in a small flask for three minutes, and when cool made up to 50 or 100 c.e. The two solutions are then colorimetrically compared in glass tubes, as in nesslerising. By adding the known solution until the tints are alike and noting the amount used, the percentage can be readily calculated.

Bolus Alba.

DR. GRAESER NAPLES has contributed an article to the "Frankfurter Zeitung" giving an account of the work of Professor Stumpf, of Wurzburg, on kaolin. Bolus, or argilla, is a silicated alumina, the disintegrated product of silica rock, and was in use as a remedy by the Arabs, Indians, and Greeks in ancient times. The earth of Lemnos was specially celebrated. Dioscorides recommended it in his "Materia Medica" as a bandage-medium and as an application for blisters from burns, gout, erysipelas, poisons, and snake-bites. Galen himself visited Lemnos to study the origin and nature of the earth on the spot. He stated that the inhabitants used bolus alba when they feared they had been poisoned or as a remedy for dysentery, haemorrhage, intestinal complaints, and plague. The fame of the therapeutic properties of kaolin continued through the Middle Ages into the eighteenth century, but it then fell into disuse through being unscrupulously recommended for every ailment. This was particularly the case as the new chemistry was making enormous progress at that period, and as the effect of bolus could not be explained it was regarded as unscientific. The people, however, remained faithful to it, at least for outward application, as they recognised its value. In the eighties Professor Stumpf began his investigations, and from that time worked indefatigably to rehabilitate bolus alba in favour. He used it successfully for the treatment of infected wounds, cellular-tissue

inflammations, and nasal catarrh. For nose and throat diseases especially its effect is remarkable, and it successfully competes with the serum treatment of diphtheria. It is also successful in the treatment of cholera.

New Books.

Any book published in the United Kingdom can be supplied to our subscribers at the price quoted. Orders, with remittance, should be sent to the Publisher, 42 Cannon Street, London, E.C.

PURVIS, J. E., and HODGSON, T. R. *The Chemical Examination of Water, Sewage, Foods, and Other Substances.* 8 $\frac{3}{4}$ x 5 $\frac{3}{8}$. Pp. 228. 9s. (Cambridge University Press.) [This is one of the Cambridge Public Health Series, and is intended for those who are attending courses of instruction for diplomas and degrees in public health, and for those who are studying the chemistry of water, sewage, foods, and disinfectants. While not exhaustive, it describes the methods that have been used and tested by the authors in laboratory instruction and in the daily work of a public analyst. The subjects dealt with in the various chapters are: (1) Water, sewage, and sewage effluents; (2) milk, cream, and condensed milk; (3) butter, margarine, lard, dripping, suet, cheese, and edible oils; (4) tea, coffee, chicory, and cocoa; (5) wheat-flour, self-raising flour, baking-powder, bread, rice, and starches; (6) pepper, cayenne, mustard, nutmeg, cinnamon, and ginger; (7) cane-sugar, golden syrup, treacle, honey, and jam; (8) alcoholic beverages; (9) vinegar and lemon-juice; (10) poisonous metals in foods; (11) preservatives and disinfectants; (12) air, coal-gas, and other gases; (13) rag-flock and urine. There are also a bibliography and tables of constants.]

Transactions and the Second Annual Report of the London Dermatological Society, with List of Officers and Members. 8 $\frac{1}{2}$ x 5 $\frac{3}{8}$. Pp. 161. Paper cover. 2s. 6d. (Bale, Sons & Danielsson, Ltd., 83 to 89 Great Titchfield Street, London, W.) [The papers read before the Society during the session 1913-14 are given in full, together with the discussion. An index of subjects is provided.]

Reviews of Books.

Pharmacology Clinical and Experimental. A groundwork of medical treatment, being a text-book for students and physicians. By DR. HANS H. MEYER, of Vienna, and DR. R. GOTTLIEB, of Heidelberg. Translated into English by PROFESSOR JOHN TAYLOR HALSEY, M.D. 9 in. by 6 in. Pp. xii + 604. (Philadelphia and London : J. B. Lippincott Co. 25s. net.)

THE therapeutics of drugs is one of the oldest of man's studies, their chemistry and pharmacology are distinct branches of knowledge, and one of the most notable outcomes of modern research in these departments is that they explain the reason why certain drugs have proved of value to man in alleviating pain and remedying diseases. We know that chemistry does not explain everything, nor does pharmacology in its investigation of the physiological action on the body of definite chemical principles always explain why a drug has been a friend to man; nevertheless, the study of pharmacology is an essential part of the physician's education, as necessary for treatment as anatomy is in diagnosis. We know that American and English pharmacologists have contributed well to the literature and progress of pharmacology, and now this presentation by Professor Halsey of Gottlieb and Meyer's work will be welcomed. The translation is good, and the translator occasionally inserts a critical or supplementary note indicating where a difference of view from the German school exists. The book comprises eighteen chapters, of which each author has written nine. Besides the pharmacology of parts of the body, the treatise deals with the pharmacology of heat regulation, inflammation, and pharmacological agents and factors influencing pharmacological reactions. The book is well illustrated, and some of the diagrams are printed in colours for differentiation and distinction. The references to original sources are numerous, and the style in which the subjects are presented is good, so that the book is remarkably readable.

Insurance Act Dispensing.

A Record of matters concerning Chemists' interests in the National Health Insurance Acts.

Review of the Year's Work.

Some reflections by an expert on the past year's work and the new year's problems.

On January 1 begins the third year of the emancipation of the chemist as dispenser to the nation. Just how much benefit has accrued must be left for each individual to determine for himself. Discounting is still more than in evidence, and where this exceeds 15 per cent. the review of the year's work will cause some heartburning. Yet, if one excepts the areas where the deductions exceed this figure, it is doubtful whether chemists will be better off without the discounting clause. Its abolition would certainly be a businesslike agreement, but it can only be effected by a business consideration of the Drug Tariff. This at present assumes a profit of 33 $\frac{1}{3}$, but the incidence of supply and the methods adopted for securing one-third profit yield an apparently higher ratio. If it were not for this fact the number of panel contractors for the supply of drugs and appliances would show a considerable decrease. Put in another way, the stipulated third *plus* dispensing-fees is inadequate remuneration for the services required. An outstanding feature of the drug-trade is the smallness of total returns. The average turnover from National Health Insurance dispensing is probably less than 10*l.* monthly in county areas and about 15*l.* monthly in county boroughs. About one-third of this represents dispensing-fees, and one-third profit on the remainder brings the gross profit to about 55 per cent. Some of the profit as well as the whole of the fees are swallowed up in labour expenses. With the gradual dying-out of present-day practitioners and the filling of their places by young freshly qualified doctors dispensing will become more varied and the fees less easily earned.

The pressing need of the day is the dovetailing of the three interests in the Drug Fund—viz., the doctors', the chemists', and the insured persons'. Circular I.C. 199, issued by the English Commissioners last September in regard to the cost of drugs and appliances (*C. & D. Diary*, p. 204), deals with methods for regulating prescribing with a view that only reasonable charges shall be imposed on the fund. This circular has been beneficial to panel chemists. A system of continuous scrutinising of prescriptions, with the object of showing absolute cost of each practitioner to the fund, cannot fail to have good results, but it has to be exercised with care if evil effects are not to follow in its wake. The best and most reasonable prescribers resent the feeling that each prescription is to be subject to special consideration when it happens not to be of a routine character, with the result that the patient may suffer.

Two courses suggest themselves in regard to the interest of chemists: first, the abolition of the discounting clause with a consequent business consideration of the Drug Tariff; and, second, continuance of the discounting clause with or without scrutiny of the Tariff, but in conjunction with the scrutinising of prescriptions, as indicated in I.C. 199. The objections to the latter are obvious, and consensus of opinion will favour the former course.

Hitherto consideration of the insured person appears to have been limited to permitting him (or her) to provide the 2*s.* for the Drug Fund. Doctors and chemists in many parts and their official representatives have been struggling with each other for sixpence in coppers out of this. This state of things must come to an end sooner or later. The common-sense view is that the Commissioners have entrusted the insured person to the tender care of the doctor and chemist. If this policy fails, then retribution must follow either in the form of State medical and pharmaceutical service or considerably increased stringency of regulations. In respect of direct State service it is interesting to note that a large minority of medical practitioners are in favour of it. It would cost less, it is thought, than the present panel system, besides

which a number of other contentious points and difficulties of working arrangements would be solved.

There is a great disparity in the numbers of insured persons as returned by the Commissioners, acting on information from Approved Societies, and those of the Insurance Committees. The latter frequently find themselves in possession of a less income than they feel it right to expect. The difficulty (which is a very real one) arises through failure of Approved Societies to notify cases where a person has ceased to be insured. It therefore behoves pharmacists to study the problems likely to arise during the year if present war conditions admit. The outlook is not bright. The enhanced prices of common drugs due to the war must tax the Drug Fund to the utmost. This should be the ground of a good claim upon the specially created fund for emergencies. The Tariff requires revision; it is full of contradictions and eccentricities. Dispensing-fees need attention; the application of *extempore* dispensing-fees to *non-extempore* dispensing is wrong in principle.

The meeting of the British Medical Association and the Pharmaceutical Society in the autumn was abortive because of the war. The statement of the latter body that the 1915 Drug Tariff had been considered by experts on both sides does not agree with that of the former. It should be understood that the Drug Tariff was accepted, not considered, by the doctors, and the final form it is to take is still to be discussed. The English Commissioners' Circular 49 I.C. in regard to stock mixtures was foredoomed to failure. Practitioners and chemists alike disagree with the principle of reduced fees or anything else that will revive the popularity of the abhorred stock mixture. (174/42.)

ENGLAND.

Doctors Removed from the Panel.

The Insurance Commissioners inform us that they are satisfied that the continuance on the panel of the following practitioners would be prejudicial to the medical service of the insured [1911 Act, Section 15 (2b)], and they have accordingly removed their names from the lists:

Dr. William Lovell, 62 Holmwood Road, West Hampstead, London, N.W. (See *C. & D.*, December 12, 1914, p. 58.)

Dr. Thos. Francis Devane, Wrockwardine Wood and St. Georges, Shropshire. (See *C. & D.*, December 12, 1914, p. 58.)

Dr. Edward J. Smith, Judd Street, London, W.C. (See *C. & D.*, December 19, 1914, p. 56.)

The Sheffield Inquiry.

As briefly reported in the *C. & D.*, December 26, 1914, p. 61, a Committee appointed by the Insurance Commissioners held an inquiry at the Board Room of the Labour Exchange, Sheffield, on December 23. Mr. John Fischer Williams, barrister-at-law, Dr. Adam Foulton, and Dr. C. H. Milburn constituted the Committee, the first-named presiding. The Town Clerk (Mr. Hart) appeared for the Insurance Committee, and Mr. Thompson for Dr. Arthur J. Rollinson, whose name the Insurance Committee have recommended to be removed from the panel of medical practitioners. The Town Clerk first asked a ruling on the mode of procedure.

The Chairman said it would be a public inquiry, and the evidence in support of the charges, which so seriously affected the professional honour of the doctor, would be taken *de novo*.

The Town Clerk said in that case the officials ought to have said it would be public, as the last inquiry was taken *in camera*.

Mr. Williams: The cases are not quite the same. The previous case was an appeal against a surcharge.

The Town Clerk mentioned the cases upon which the complaint against Dr. Rollinson was based. The first had to be abandoned, as the written complaint of the patient (now on active service) could not be admitted as evidence; the second was a charge of neglect by Mrs. Haywood in regard to the treatment of her husband, the late C. F. Haywood: also for making a charge for medicine and a further charge for a death-certificate. A Coroner's inquest was held on the case, and the jury added to their verdict a rider disapproving of the charge made for death-certificates. The third case was for not signing off a female patient, knowing she was capable of work. It was shown by agreement that the doctor was not entitled to charge for medicine, and that it is illegal under Section 20 of the Births and Deaths Act to charge for a death-certificate.

Alderman Cattell, Chairman of a Sub-Committee of the Insurance Committee, was called, when the Chairman ruled he could not take evidence on the transactions of the Committee. The Alderman insisted that the honour of the Committee should be held equally high with the doctor's honour; if their word was to be of no avail, then the Committee would have to consider their position.

The Chairman said he hoped that Alderman Cattell would not take it that any reflection was cast upon the Committee. He quite appreciated the public spirit with which these gentlemen came forward to undertake public work, but his (the Chairman's) duty that day was to take legal evidence on behalf of the Commissioners.

Alderman Cattell, who was accompanied by Mr. Slack, then withdrew.

Mrs. Mary Haywood said she called upon Dr. Rollinson on Sunday at 7.45 P.M. (the surgery hours being from 6 to 8), when she was told she was too late, but a bottle of medicine was eventually supplied, for which she paid 6d. The doctor visited on Wednesday. The Union medical officer was called in, and he ordered her husband into the Union hospital, but he was unable to be removed when the ambulance called, as he was dying. Her son was charged 1s. for the death-certificate. Mrs. Haywood was cross-examined by Mr. Thompson to show she went out to work.

Mr. F. Mander (Chesterfield), accountant for the Approved Society of the Independent Druids, said they received a report from their sick-visitor saying that she was not satisfied with the case of Clara Marshall, who, in her opinion, should have been declared off. The member was fined for irregularities. The doctor was written to, being informed that the case was unsatisfactory and should have been declared off, as the funds of the Society were being depleted.

Miss Fullerton, sick-visitor, was called, and said she visited the case at 6 P.M. on July 28 and found the woman worse for drink, but the woman asked that she might be allowed to remain on the sick-list until after Bank Holiday. She (the sick-visitor) saw the doctor, who said the woman was quite ready for work. The patient was not declared off until August 4.

Mr. Thompson decided not to call Dr. Rollinson, but cross-examined Miss Fullerton.

The Town Clerk, in summing-up the case, said he was surprised that Dr. Rollinson was not sworn, when he was charged with illegally charging 1s. for a death-certificate under the Births and Deaths Act and improperly charging a patient for medicine and conspiring with the patient to retain her on the panel until after the holidays.

Mr. Thompson submitted that there was no evidence of neglect, and that his client might have erred, but not sufficiently to remove him from the panel.

The Commissioners will announce their decision later.

Alleged Excessive Charging by Chemists.

Mr. J. Fischer Williams, barrister-at-law (in the chair), Mr. Francis Bate, J.P., and Mr. P. Rowsell, J.P., F.C.S., held an inquiry at the Bristol Council House, on December 29, concerning allegations of excessive charging against Messrs. J. G. Plumley & Son, chemists, Bristol. The principal case related to a prescription for 6 oz. of iodine liniment bearing the initials of Dr. Windsor Aubrey, and for which a charge of 3s. 2d. was made. The prescription was in the name of Sarah Facey.

Dr. Aubrey stated in evidence that the name of the patient was not in his handwriting, and he had no patient of that name on his list. Early in 1914 he had run out of official prescription-forms, and wrote an ordinary prescription for one of his panel patients on an ordinary piece of paper, adding a request to the chemist to dispense as directed, and promising to send on the official form later. Some time afterwards he met Mr. H. J. Plumley in the Savages' Club, Clifton, and was asked by him to look in at the shop and fill in the proper form. That was the first he knew of Mr. Plumley having made up the prescription. When he called at the shop he was in a hurry, and Mr. Plumley not being able to put his hand on the original prescription, he initialed a blank form and left the chemist to fill in the details—which he briefly outlined to him—when he found the original.

In reply to the Committee, Dr. Aubrey said that he might safely say that he had never prescribed iodine in that particular form since he had been on the panel.

In reply to Mr. Salisbury, who represented Mr. Plumley, the doctor said that the difference between the cost of the prescription which he ordered and that filled in by Mr. Plumley would be about 3s. 2d.

Mr. Bate: When you gave that blank prescription-form, when both you and the chemist were in ignorance of what the prescription was, did it not occur to you that you were doing an irregular thing?

Dr. Aubrey: I took it that it would be done in a straightforward way.

Mr. S. C. Paget, Clerk to the Bristol Insurance Committee, gave evidence. He said that his attention was called to the prescription by an official in his office—a qualified dispenser, who checked the prescriptions. It was noticed that the handwriting on the prescription was not the same as the doctor's. Mr. Paget detailed his correspondence and interviews with Mr. Plumley, and said that an inquiry was held at Bristol on June 25, after which the representations were made which led to the present inquiry. The patient, Sarah Facey, was on another doctor's list, and Messrs. Plumley had made up a considerable quantity of medicine for her. He subsequently referred to seventeen other prescriptions in which Messrs. Plumley overcharged, the dispensing-fee being charged twice in eleven cases.

Mr. Salisbury admitted that the prescription for liniment of iodine was Mr. Plumley's mistake. The others, however, arose when Mr. Plumley was on holiday, and were the work of an assistant, who had since left his employ.

The Chairman, speaking in reference to the case of the iodine prescription, said: I am bound to point out to you that the matter is of a rather more serious character than your client seems to appreciate. This is not a case of drugs being prescribed which are not on the list. It is a case in which a blank form is procured and then used for an improper purpose.

Mr. Salisbury: I appreciate that.

After hearing further evidence, the Committee intimated that the inquiry was closed, and that their report would be submitted to the Commissioners.

Reports from Local Centres.

With special reference to the supply of medicines and appliances. See also Winter Session.

Bristol.—Panel chemists have agreed to the new Tariff, but have passed a strong resolution of protest against the stock-mixture clause. The matter of the under-payment of the first year is still being gone into with the Insurance Committee, but so far no results have been attained. With one exception, all the chemists have signed on the panel for 1915.

Burnley.—At a meeting of the Insurance Committee on December 29 a letter was read from the local Pharmaceutical Committee asking that payments in respect of chemists' accounts for drugs, etc., should be made monthly at the rate of at least 95 per cent. The Committee decided to pay quarterly, and at the rate of 95 per cent. of the accounts, or of the amount available in the Drug Fund, as circumstances may determine. The Pharmaceutical Committee also reported that arrangements had been made among panel chemists for opening premises in rotation at all reasonable times for insured persons. The Clerk added that in each district at least one shop is open on Tuesday evening (the half-holiday) from 7 until 8 P.M. It was agreed to ask chemists to extend the time to 8.30.

Devonport.—At a meeting of the Insurance Committee on December 29, the Medical Benefit Sub-Committee reported that the payments to doctors for 1913 and three quarters of 1914 amounted to 10,292*l.* 5*s.* 9*d.*, and to chemists for the same period 2,674*l.* 5*s.* 2*d.* The details of the prescriptions were as follows: Number of prescriptions dispensed, 1913, 47,133; 1914 (three quarters), 38,402; average per prescription, 1913, 7.18*d.*; 1914 (three quarters), 7.83*d.*; average per insured person, 1913, 1*s.* 8*d.*; 1914, (three quarters), 1*s.* 3*d.*

Huddersfield.—At the meeting of the Insurance Committee on Thursday, December 24, it was reported that no chemist had given the requisite notice of his intention to withdraw from the panel, the only alteration being that one chemist would cease to dispense at his private address. The new system of medical certification was approved as advantageous to all concerned. A report from the Pharmaceutical Committee showed that the Drug Fund for 1913 had been exceeded to the extent of 417*l.* 8*s.* 3*d.* After exhaustive analysis of all the prescriptions for that year, no complaint could be made of excessive or extravagant prescribing, and the Committee concluded that the deficiency must be due to other causes.

Plymouth.—The Commissioners have asked the Plymouth Insurance Committee what they propose to do regarding the Panel and Pharmaceutical Committees' reports as to excessive prescribing during the year which ended on January 11, 1914. The Medical Benefit Sub-Committee have decided to ask the Commissioners for guidance, especially as to how surcharging is dealt with in other areas.—At the meeting of the Insurance Committee on Tuesday evening, December 29, it was decided to send

a deputation to London to meet the Commissioners. Dr. Palmer said the percentage of persons treated at Plymouth is high—64 per cent. If doctors were surcharged, he thought they would refrain from prescribing some things they thought necessary, and it would lead to a belittling of the Insurance Act in the minds of the people. It was suggested that a doctor should be added to the deputation, but none was willing to serve.

Portsmouth.—The "Year-book" of the Insurance Committee for July 15, 1912, to June 30, 1914, states that out of the sixty-nine practitioners on the panel, one doctor has over 3,000 patients, one between 2,000 and 3,000, eight between 1,500 and 2,000, thirteen between 1,000 and 1,500, four between 750 and 1,000, fifteen between 500 and 750, eleven between 250 and 500, four between 100 and 250, four between 50 and 100, and seven have less than fifty patients. There are forty-three chemists on the panel; during 1913 they dispensed 163,843 prescriptions at a cost of 5,107*l.* 2*s.*, the average cost rising from 6*2d.* in the first quarter to 8*1d.* in the fourth quarter. In the first quarter of 1914 the number was 59,013, the cost 2,190*l.* 16*s.* 7*d.* (average 8*9d.* per prescription), and in the second quarter 42,755, cost 1,500*l.* 17*s.* 5*d.* (average 8*4d.*). On an average (says the report) each insured person who receives medical treatment during the year also receives six bottles of medicine (or their equivalent in appliances). The drop in the price per prescription in the second quarter of 1914 is chiefly attributable to the decision of the Committee to cease to allow a charge for distilled water unless specially prescribed, which then became operative. In 1913 the chemists' accounts were paid in full. The cost of drugs and appliances was 1*s.* 11*1¼d.* per insured person, and a sum of three-farthings of the so-called "floating sixpence" was paid to the doctor.

Southampton.—The Clerk reported to the Insurance Committee on December 21 that the Commissioners have refused to sanction the insertion in the stock-mixture clause of the words suggested by the Committee (*C. & D.*, November 28, p. 62). Otherwise they approve of the Tariff submitted.

Southport.—The Insurance Committee met on December 29, when it was reported that there are forty-four doctors on the panel and twenty-eight chemists. Referring to the new method of medical certification, a member said it was based on common sense. He hoped that the doctors would carry out the instructions, and that the trouble that the secretaries of societies had had during the last two years would come to an end.

Surrey.—The Insurance Committee at its meeting on December 23 adopted Mr. Coles's motion to the effect that stock mixtures are not in the best interests of insured persons; further, that all prescriptions or formulae should be made up fresh at the time of order by the chemist, and not kept in bulk form or as stock mixtures. The 215*voted* to the Pharmaceutical Committee represents the following annual expenses: Rent of room or office, 25*l.*; office equipment, 10*l.*; salary of Secretary, 25*l.*; clerical assistance, 25*l.*; printing, postage, etc., 20*l.*; cleaning and incidentals, 10*l.*; share of cost of checking prescriptions, 100*l.* The Panel Committee wrote in November to the Insurance Commissioners stating its reasons against the allowance of expenses to the Pharmaceutical Committee, saying that any deduction of this nature is unreasonable, and also that the expenses of the Committee are far too high. It was added that if the expenses were reduced to 50*l.*, plus a third of the cost of checking prescriptions, the Panel Committee would not maintain its objection. At the same meeting the Panel Committee decided to support the action not to bring the reduced dispensing-fees into force during 1915.

Worcester.—At the meeting of the Insurance Committee on December 22, the price-list of The British Drug Houses, Ltd., was, on the recommendation of the Pharmaceutical Sub-Committee, adopted as "the basis for scheduled drugs"—presumably those which are not priced in the Tariff.

SCOTLAND.

The Central Checking Bureau.

Regulations have been issued by the Scottish Insurance Commissioners defining the powers and constitution of the Drug Accounts Committee, which it was recently decided to form in connection with the Central Checking Bureau. The purposes of the Committee are:

(1) To scrutinise the accounts furnished to each Committee in terms of the Regulations by chemists and other persons in respect of drugs, medicines, and appliances supplied by them to insured persons on and after January 1, 1915, and to make such reports on said accounts to the Committee as may be necessary for the purposes of the Committee;

(2) To make and furnish such statistical and other returns and such reports with reference to said accounts as the Commissioners may require; and

(3) To do such other things as are incidental or conducive to the attainment of the above purposes.

The manner in which the Committee is to be appointed is fully described. Of the fourteen members, ten will represent Insurance Committees, two are to be medical practitioners, and two chemists. Of the last, one will be appointed by Pharmaceutical Committees of the counties and one by Pharmaceutical Committees of the burghs; as in the case of doctors, it is not necessary that the chemists elected should be panel chemists. Special provisions are made for Glasgow, whose Pharmaceutical and Panel Committees will each have a vote of the value of seven. Five members of the Drug Accounts Committee will form a quorum. Provision is made (1) for removing members who absent themselves for six months, (2) for resignations, and (3) for filling vacancies. In a schedule the votes of the Insurance Committees in the eight electoral divisions are set forth. The Glasgow Insurance Committee is independent, and returns two members. As to money for the expenses of the Drug Accounts Committee, pending the determination of the sum payable by each of the three Committees in each locality, the Commissioners may during the year make such provisional debits to the Committee and credits to the Drug Accounts Committee as they may think proper, having regard to the number of prescriptions comprised in the accounts furnished to the Committee by chemists and other persons in respect of drugs, medicines, and appliances supplied by them to insured persons during the immediately preceding year. Nothing contained in the Regulations shall prevent the Drug Accounts Committee accepting payments towards its administrative expenses from any persons or body, or any other payment to be applied for any purpose consistent with the purposes of the Committee. Where a Panel or Pharmaceutical Committee agrees to contribute towards the Committee's share of the administrative expenses of the Drug Accounts Committee, nothing in the Regulations shall prevent the Committee making arrangements for the supply by the Committee to the Panel or Pharmaceutical Committee, as the case may be, of such reports of the Drug Accounts Committee as may be agreed upon. The paper is "Regs. No. 37 (Scotland)."

Notes.

OVER-PRESCRIBING.—At last month's meeting of the Insurance Act Committee of the British Medical Association, a reply from the English Commissioners to the Committee's communication as to charges against medical practitioners for alleged over-prescribing was received. The reply expressed the opinion that when an Insurance Committee, after considering the report of the Panel Committee, arrived at the conclusion that the doctor had not been guilty of over-prescribing, it was not desirable that the name of the doctor should be disclosed. The Commissioners pointed out that the decision in the matter rests with the Insurance Committees, and not with the Panel Committees.

DOCTORS AND EXCESSIVE PRESCRIBING.—A correspondent of the "British Medical Journal," writing on this question, states that other interests than medical seem of late to have determined the actions, utterances, and advice of medical bodies. "What," he asks, "means the advice of the Association to Panel Committees that they should share the cost of a scrutiny of prescriptions with Insurance and Pharmaceutical Committees? Why are we asked by our own people to pay part of the cost of bolstering up a case against ourselves by our opponents?" He suggests that the Commissioners having already given this advice, the Association took the line of least resistance. With regard to surcharging, "Does the profession," he asks, "accept 2*s.* per insured person as a heaven-inspired figure, beyond which no man can go save at his own cost? My own figure works out at 1*s.* 9*d.*, my neighbour's at 2*s.* 3*d.* He is extravagant, and must be surcharged 3*d.* With equal logic I should find 3*d.* as being inefficient to that amount. Dare any medical man, or any body of medical men, assert the fact that a man's rate per head is above the divine 2*s.* limit is sufficient to condemn him for extravagance in prescribing? Yet this is the true meaning of the automatic surcharge."

CHINESE GALANGAL.—There has been a notable increase in the production and export of galangal from China during the past few years, the United States taking an unusually large share of the product for the use of the Chinese in that country. The exports from China come from Kiunchow, the port of the island of Hainan, and are handled by Hong-Kong firms exclusively. The cultivation of the root in Hainan is increasing every year, and the Chinese growers are giving it unusual attention.

Trade Report.

The prices given in this section are those obtained by importers or manufacturers for bulk quantities or original packages. To these prices various charges have to be added, whereby values are in many instances greatly augmented before wholesale dealers receive the goods into stock, after which much expense may be incurred in garbling and the like. Qualities of chemicals, drugs, oils, and many other commodities vary greatly, and higher prices than those here quoted are charged for selected qualities of natural products even in bulk quantities. Retail buyers cannot, therefore, for these and other reasons, expect to purchase at the prices quoted here.

42 Cannon Street, E.C., December 31, 6.30 p.m.

HOLIDAY influences and stocktaking operations have reduced business to current requirements only. The bulk of price-changes are, however, in favour of sellers. They include an advance in antimony, English castor oil, colocynth-pulp, hydrastis, potassium chlorate, and turpentine. Copper sulphate and ammonia sulphate, oxalic acid, and sulphur are firmer. Linseed oil, arsenic, chloral hydrate, hydroquinone, and gambier are more or less cheaper. The principal changes have been as under :

Higher	Firmer	Easier	Lower
Antimony ; Bleaching- powder (contracts)	Ammonia sulphate	Arsenic Chloral- hydrate	Gambier Hydroquinone Linseed oil
Castor oil (English)	Copper sulphate		
Cinnamon	Ergot		
Colocynth pulp	Oxalic acid		
Hydrastis	Sulphur		
Potash chlorate			
Turpentine			

Cablegrams.

NEW YORK, December 24.—Business in drugs is quiet. Opium has advanced 30c. per lb. to \$9.20 for druggists' by single cases. Peppermint oil in tins is steady at \$1.35, and menthol is also steady at \$2.50. Guarana is dearer at \$1.10. Seneca is unaltered at 38c., and hydrastis has been reduced to \$4.20 per lb. (since advanced).

NEW YORK, December 31.—The drug-market is dull. Opium is lower at \$9.00 per lb. for druggists' in single cases. Peppermint oil in tins and menthol are unchanged. Cartagena ipecacuanha is dearer at \$1.90 per lb. Belladonna-leaves are cheaper at \$1.25, and seneca is firmer at 38c. Buckthorn-bark is steady at 18c. per lb.

London Markets.

ACETO-SALICYLIC ACID remains very scarce, at from 6s. to 6s. 6d. per lb.

AMMONIA SULPHATE is 2s. 6d. per ton higher, grey 25-per-cent. offering at 11*l.* 2s. 6d. to 11*l.* 5s. per ton, London; 11*l.* 17s. 6d. to 12*l.* Hull, prompt; 12*l.* 2s. 6d., Leith, prompt; 12*l.* 2s. 6d., Liverpool, prompt, less 3*l* per cent.

ANISE OIL (STAR).—"Red Ship" brand for December-January shipment is offered at 3s. 8d. per lb. c.i.f.

BLEACHING-POWDER.—The spot values are from 7*l.* 15s. to 8*l.* per ton ex wharf. Makers for next year's delivery in quantity have advanced their prices 10s. to 15s. per ton, and are pretty freely sold.

BROMIDES are unchanged, with a fairly steady demand. Prices are now at a level which is not likely to induce much cutting. Potassium is 3s. 2d., sodium 3s., and ammonium 3s. 3d. per lb.

CASTOR OIL.—English-drawn is 20s. per ton dearer at 27*l.* per ton in barrels for prompt to June 1915 delivery, delivered free on wharf, London. Finest medicinal quality is 50s. per ton over the price of first-pressing, and oil in tins and cases 50s. per ton over the respective price in barrels. In Liverpool, good seconds Calcutta is quoted 5*l*. per lb.; 250 cases from Calcutta have arrived.

CHLORAL HYDRATE.—A limited quantity of actual Swiss make is obtainable for forward delivery at 5s. per lb., duty paid.

CINNAMON is dearer, Ceylon assortment offering at 8*l.* per lb. c.i.f. for January-February, 9*l*. for firsts, and 8*l*. 6*d.* for seconds.

CLOVES.—Zanzibar remain quiet, with spot sellers of fair at 7*l*. 4*d.* and November-December shipment at 6*l*. 6*d.* per lb. e.i.f.

COCAINE is unchanged and in fair demand for both home and export; 7s. 6*d.* per oz., less 5 per cent., is quoted.

CODEINE is unchanged, at 23*s.* per oz. net, nominally, for the pure crystals.

COD-LIVER OIL.—Our Bergen correspondent writes on December 21 that the previous quotation of 9*l*. per barrel, c.i.f. terms, is well maintained for primo non-congealing oil, but, as is usual at this period of the year, business is limited. Market is likely to remain firm, owing to difficulty of securing freights and the uncertain outlook in regard to the fishing, which commences towards the end of January. Finest non-congealing medicinal Lofoten oil is worth about 9*l*. 6*d.* per barrel ex wharf London.

COLOCYNTH.—The market for pulped is now very bare, sales having been made at 1*s.* per lb., with 1*s.* 3*d.* to 1*s.* 6*d.* asked. Apple is practically at the same level as pulped.

COPPER SULPHATE.—Rather firmer and more demand, at 21*l.* 15*s.* per ton for best Liverpool brands, and 22*l.* for the first three months of next year.

COTTONSEED OIL.—Steady, at 25*s.* 6*d.* for crude in pipes on spot, 28*s.* for pale refined in pipes, and 30*s.* to 31*s.* 6*d.* for sweet refined in barrels.

CREAM OF TARTAR is unaltered, at 14*l*. per cwt. for 98-per-cent. powder.

FORMALDEHYDE remains unchanged at 5*l*. per cwt. on spot.

GAMBIER is lower, with sales of January-February shipment at 19*s.* 9*d.* c.i.f.; sellers of No. 2 quality cubes quote 23*s.* c.i.f. d.w. for January-February shipment.

GLUCOSE.—Sellers of the usual brands American liquid quote 12*l.* 4*d.* per cwt.

HEXAMINE is offered at the moderately low price of from 3*s.* 3*d.* to 3*s.* 6*d.* per lb. A large quantity of American has been appropriated for export.

HYDRASTIS.—Export orders in New York have led to an advance to 19*s.* 3*d.* per lb. c.i.f., and spot holders have raised their prices in sympathy.

HYDROQUINONE can be bought at from 8*s.* 6*d.* to 9*s.* per lb.

INDIGO.—A Calcutta advice of December 2 states that the only business to report is the sale of 23 chests Doudpore at 13*s.* per lb. landed London, terms which would appear to be about equivalent to Rs. 640 per maund, Calcutta.

IODINE.—English makers still offer resublimed at Convention prices, and can now give fairly prompt delivery. Various imported parcels from neutral countries have been readily absorbed.

IPECACUANHA.—Matto Grosso remains very firm at from 15*s.* to 16*s.* per lb., a limited quantity only being obtainable at the lower figure.

LEMON OIL.—A Sicilian advice, dated December 19, states that a few inquiries for December delivery, to fulfil both local and foreign contracts, gave a little firmer tone to the market. There is, however, not much actual change in prices, as buyers have not shown great anxiety to cover their requirements, and have only occasionally paid the slight advance. However, there is certainly a stiffening in the feeling and in the general situation, which becomes more apparent by the reluctance of sellers to bring goods forward or take engagements for future deliveries. In London prices remain unchanged at 4*s.* 3*d.* to 4*s.* 6*d.* per lb., and at 3*s.* 8*d.* to 4*s.* c.i.f. for new crop.

LINSEED OIL is cheaper at 23*s.* 6*d.* per cwt. in pipes on spot, and at 24*s.* in barrels.

MENTHOL.—Steady, at 10*s.* 9*d.* for Kobayashi and 10*s.* 6*d.* for Suzuki on the spot; the latter brand is quoted at 8*s.* 3*d.* c.i.f. for January-March, and a sale of 10 cases is reported at 10*s.* 9*d.* c.i.f. combined with oil for January-March shipment.

MILK-SUGAR is unchanged, but may go higher, as the quantity on offer is not large; from 75*s.* to 77*s.* 6*d.* is quoted for best makes, and business done.

MINT OIL.—Japanese dementhrolised (Suzuki) brand is quoted at 2*s.* 10*d.* per lb. c.i.f. for January-March shipment.

MORPHINE remains unchanged, at from 13*s.* 3*d.* to 13*s.* 6*d.* per oz. net for hydrochloride powder, according to quantity. Makers are apparently in a better position to give delivery, but they are still busy.

NUX VOMICA.—Business on c.i.f. terms with Indian shippers is very difficult to complete. Quotations for Calcutta is about 13*s.* 6*d.* and Madras 14*s.* per cwt. c.i.f. London.

OPIUM.—A holiday tone has prevailed, there being nothing of interest to report, the value of 11*l*. 2*d.* per cent. Turkey

druggists' being 27s. to 27s. 6d. per lb. The *Albistan* has brought 466 cases from the Persian Gulf, about half of which have been sold to arrive.

OXALIC ACID.—Supplies are not plentiful, and 8*1/2*d. net is asked and obtained for casks.

PALM OIL is dearer, with Lagos selling in Liverpool at 30s. 9d. per cwt.

PEPPER is steady, black Singapore selling at 6d. per lb. for fair; sellers of fair Tellicherry ask 6*1/2*d., and fair Lampung 5*1/2*d.; sellers of Singapore for December-January shipment ask 4*1/2*d. per lb. c.i.f. White Singapore on spot is quoted 9*1/2*d., and fair Muntok at 10d.; to arrive, sellers of Singapore for January-February shipment quote 8*3/4*d., Muntok at 9*1/2*d., and Penang at 8d. per lb., all c.i.f. d.w.

PEPPERMINT OIL.—American in tins is quoted at from 6s. 9d. to 7s. per lb. net on the spot for leading brands, and to arrive 6s. 4*1/2*d. c.i.f. is wanted. Advices from the United States intimate that early in January an upward movement may be expected. Growers are reluctant sellers at present prices, which they consider too low.

PETROLEUM is unaltered, Russian offering at 8*1/2*d., ordinary refined American at 7*1/2*d., and water-white at 8*1/2*d. per gal.

PHENACETIN is still very scarce on spot, and is quoted 6s. 6d. per lb.

PHENAZONE.—Fair stocks exist on the spot, and prices are unchanged.

POTASH CHLORATE has advanced to 1s. to 1s. 1d. per lb., being very scarce. *Soda Chlorate* is unchanged at 8*1/2*d. to 9d.

QUICKSILVER.—Quiet, at from 11*1/2*. 2s. 6d. to 11*1/2*. 5s. per bottle. The exports from Leghorn during 1913 amounted to 9,266 ewt. (102,783.), against 9,800 ewt. (208,904.) in 1912. Last year the exports from that port to Great Britain were 4,939 ewt. (54,327.), or 53 per cent. of the total quantity exported, against 6,220 ewt. (69,366.), or 63 per cent. of the total in 1912.

QUININE is firm, and of late a good export business has been done at firm prices, up to 1s. 2d. per oz. having been paid.

SALICYLATES.—Prices remain unchanged, but very firm, at 4s. 6d. per lb. for *acid* and 5s. 3d. for *soda*. American makers are unable to spare moderate quantities for export, as they are badly off for carbolic acid, the export of which is prohibited from England and Germany. We understand that a permit has been granted to the London agents of a German chemical firm to import a certain quantity of salicylates to be invoiced at pre-war prices.

SANTONIN.—We note the arrival of three cases from Christiania. This shipment is probably from Russia. Cases are usually of 50 kilos. each. Demand is quite retail, with second-hand holders asking 220s. to 230s. per lb.

SENEGA is steady, with spot sales at 1s. 9d. net.

SENNA.—It is probable that an auction of Tinnevelly senna will be held early in the new year, as between four and five hundred bales have lately arrived.

SELLAC, after being easier, is now firmer, owing to higher prices having been paid in Calcutta. Usual standard TN Orange on the spot is quoted 64s. per cwt. Value of March delivery TN is 65s.

SODA-HYPOSULPHITE.—As is usual at this time of the year, demand is quiet, with small crystals offering at 10s. to 11s. per cwt.

SULPHUR is on the firmer side again, at 11*1/2*. per ton ex wharf for best Sicilian flowers and 10*1/2*. 10s. for *roll*.

TURPENTINE shows an aggregate advance of 1s. 3d. per cwt. on the week, with a fair demand, American closing at 36s. 3d.

Heavy Chemicals.

December 29.

The latter part of the past year has been a most eventful one. Up to the time of the declaration of war business had gone on in the usual jog-trot fashion, but now one has to go back to the 1870 period, when there was a demand for heavy chemicals which taxed the resources of British manufacturers to an almost alarming extent. It must be admitted this year that generally manufacturers of bleaching-powder and kindred products did not strain the feeling of buyers to breaking-point; indeed, they have exhibited a remarkable restraint, which will no doubt bear fruit in the coming year, when foreign competition may probably begin to manifest itself. With the exception of perhaps bleaching-powder, there does not seem to be a very great advance in prices, and this is noteworthy in contrast to the higher prices of labour and increased cost of fuel. In miscellaneous articles, perhaps the greatest change is to be noted in cream of tartar, which has risen from 94s. to 145s. per cwt. Acids have also had some advance. Sulphate of copper shows little change. Coal-tar products show a general advance. Carbolic acid and other products closed dearer.

Arrivals.

During the period December 17 to 29, inclusive, the following chemicals, drugs, and allied produce have arrived at the principal English ports. Goods *in tr.* are not included. Where not stated, the figures denote packages:

Acetio acid (Genoa) cks. 7, (New York) brls. 267, (Rotterdam) blns. 15	Ginger (Ceylon) 100, (Hong-Kong) 375
Acetone (U.S.A.) dms. 596	Glucose (New York) 1,779
Agar-agar (Kobe) 10	Glycerin (Bilbao) dms. 10, (Genoa) dms. 40, (Pasages) dms. 120, (Marseilles) dms. 564, (Rotterdam) cs. 20
Albumen (China) 17, (Havre) 20	Gum acacia (Bombay) 115
Alcohol, wood (U.S.A.) brls. 70, dms. 496	Gum copal (W.C. Africa) 20
Almond oil (Marseilles) cs. 11	Gum damar (Singapore) 25
Aniline dyes, colours, etc. (Amsterdam) pkgs. 29, (Rotterdam) 32, (Genoa) brls. 43, cs. 21, cks. 74, (Boulogne) cks. 30, (Dieppe) cks. 59, (Bordeaux) cks. 135, (St. Malo) 11	Gum kauri (Auckland) 46
Anise (Marseilles) 13, (Spain) 50	Gums, unenum, (Amsterdam) es. 65, (Persian Gulf) bgs. 1,419, cs. 90, (Lisbon) 105, (Havre) 90
Anise oil, star (Hong-Kong) cs. 90, (Bombay) 20	Herbs (St. Malo) bls. 9, (Marseilles) bls. 48
Antimony (China) cs. 2,535, (Bombay) 580, (Japan) 1,329, (Bordeaux) 235	Honey (New Zealand) 23, (Savannah) brls. 30, (New York) cs. 109
Antimony ore (Hankow) 1,800	Indigo (Naples) cs. 28, (New York) cs. 28, serons 28, (Calcutta) 111, (Java) 43, (Madras) 185
Antimony oxide (France) 31	Iodine (Iquique) kgs. 33
Araroba (Bahia) cs. 32	Juniper-berries (Leghorn) 15
Argol (Bordeaux) 101, (Oporto) 28	Kola (Rotterdam) 38
Arrowroot (Trinidad) brls. 327	Leaves, medicinal (Algiers) bls. 51
Balsams (Montreal) brls. 2, (Colon) cs. 5	Lemon oil (Palermo) cs. 17
Barium oxide (Marseilles) 40	Lime acetate (Boston) 3,420
Barytes sulph. (Marseilles) 22	Lime citrate (Catania) 88
Benzozates (U.S.A.) brls. 4	Lime-juice (Trinidad) pns. 2, hds. 36, cks. 173, brls. 2
Benzoin (Penang) cs. 172	Lime oil (Trinidad) cs. 11, dms. 2, ck. 1
Boric acid (New York) 150	Linseed (Argentine) bgs. 29,832, (India) 95,124, (Morocco) bgs. 1,000
Calcium carbide (Sweden) 440	Liquorice-juice (Marseilles) 10
Camphor, crude (Keelung) cs. 295, (Tamsin) 120	Liquorice-paste (Marseilles) 100
Camphor oil (Kobe) 100	Liquorice-root (Malaga) 30, (Marseilles) 91
Camphor, refined (Kobe) cs. 345	Listerine (New York) cs. 740
Canary-seed (Morocco) 205, (Spain) 95	Lithopone (Holland) 750
Cantharides (Canton) cs. 30, (Bombay) 5	Magnesite (Rotterdam) 125
Caraway-seed (Holland) 160	Magnes. carb. (Amsterdam) cs. 60
Cardamoms (Colombo) 93	Magnes. chlor. (Rotterdam) brls. 203, (Sweden) 252, (Amsterdam) dms. 18
Cascara sagrada (Pac. Coast) 402	Manna (Palermo) 4
Casein (France) 391	Menthol (Kobe) cs. 10
Cassia lignea (Rotterdam) 100	Mercurial salts (Genoa) cs. 5
Castor oil (Calcutta) cs. 206	Methyl salicy. (Rotterdam) cs. 10
Celery-seed (Marseilles) 25	Milk-sugar (Havre) 5, (Genoa) 24, (Cherbourg) 10
Chamomiles (France) 45, (Rotterdam) 40	Mineral waters (Marseilles) cs. 1,940, (Honfleur) 78, (Paris) 950, (Dieppe) 405
Chemical products (Dieppe) pkgs. 8, (New York) pkgs. 854, (Gothenburg) brls. 247, (Dunkirk) cks. 245, (Paris) 20, (Rotterdam) cks. 208, pkgs. 49, (Tropicort) cs. 18	Mineral white (Bordeaux) 1,750, (Genoa) 600, (U.S.A.) 900
Chillies (Mombasa) 138	Mint oil (Japan) 30
Chloroform (New York) cs. 5	Nut oil (Holland) cks. 147, brls. 60, dms. 65
Cinchona (Java ports) 1,979	Olibanum (Greece) cs. 30, (Bombay) 12
Citric acid (Marseilles) cks. 20, brls. 24, (Palermo) cks. 68	Olive oil (Malaga) cks. 767, brls. 50, (Marseilles) cks. 308, cs. 394, pkgs. 51, (Seville) brls. 1,230, dms. 72, (Bordeaux) cs. 225, (Bari) brls. 11, cs. 24, (Leghorn) cs. 131, (Patras) brls. 20, (Genoa) brls. 38, (Corfu) 4 cks. 24
Cochineal (Las Palmas) 51	Opium (Hong-Kong) 509, (Persian Gulf) 28, (Genoa) 3, (Singapore) 23, (Calcutta) 5, (Colombo) 7
Cocoa butter (Amsterdam) 20	Orange-peel (Amsterdam) 12
Cod-liver oil (Bergen) 141, (Alesund) 103	Orris (Leghorn) 35
Coriander-seed (Morocco) 154	Palm oil (W.C. Africa) cks. 3,582, (Lisbon) 305
Cream of tartar (New York) cks. 130, (Marseille) brls. 32, cks. 230, (Bordeaux) kgs. 29, cks. 105, (Palermo) 96, (Patras) brls. 20	Papain (Ceylon) pkgs. 8
Cumin seed (Morocco) 36	Paraldehyde (Quebec) cs. 5
Dextrin (Rotterdam) 370	Perfumery (Calais) 12, (Dieppe) cs. 33, (Havre) 69, (Paris) 26, (Marseilles) 125
Drugs (Dieppe) pkgs. 14, (Havre) 141, (Japan) cs. 10, (Rotterdam) bls. 10	Perfumes syn. (Holland) pkgs. 25
Ergot (Lisbon) 7, (Oporto) 8	Phosphorus (Quebec) cs. 250, (St. John) 250
Essential oils (Messina) cs. 150, pkgs. 190, (New York) cs. 224, (Catania) 16, (Hong-Kong) 12, (Trinidad) cs. 5	Pimento (New York) 100
Eucalyptus oil (Australia) 251	Potash carb. (Rotterdam) cs. 31, (Amsterdam) cs. 180
Farina (Holland) bgs. 3,096	Potash caustic (Genoa) cks. 40
Fennel-seed (Persian Gulf) 285	Potash iodide (Japan) 20
Fennugreek-seed (Casablanca) 150	
Formaldehyde (U.S.A.) brls. 191, (Montreal) 28	
Formic acid (Rotterdam) ebys. 148, blns. 149, cks. 4	
Galls (Persian Gulf) 268	
Geranium oil (Algiers) cs. 2, (France) 3	

Potash metabisulph.	(Rotterdam) 58
Potash perchlor.	(New York) kgs. 50
Potash prussiate	(Genoa) 73, (France) 14
Potash salts (various)	(Sweden) eks. 35, dms. 34, (Denmark) eks. 20, (Rotterdam) 325
Potash sulphate	(Rotterdam) bgs. 500
Potashes	(New York) 10
Quicksilver	(New York) 20, (Lisbon) 50
Quillala	(Montevideo) 148
Quince-seed	(Spain) 3
Quinine	(Amsterdam) cs. 20, (Rotterdam) pkgs. 31, (Batavia) cs. 25
Rape-seed oil	(Japan) cs. 8,700
Rhubarb	(Shanghai) 12
Roots, barks, leaves, etc.	(Marseilles) bls. 108, (New York) 59
Rose-water	(Marseilles) 25
Saccharin	(Rotterdam) 5
Saffron	(Valencia) cs. 3
Saltpeatre	(Calcutta) bgs. 17,658
Santonite	(Christiania) cs. 3
Sarsaparilla	(New York) 50, (Jamaica) 6, (Colon) 9
Senna	(Alexandria) bgs. 100, (Marseilles) 29
Shell, button, and garnet lac	(Calcutta) 1,205
Silver nitrate	(Paris) cs. 12
Soda chlorate	(Marseilles) eks. 200, (Gothenburg) kgs. 100
Soda hypo	(U.S.A.) 1,100
Soda nitrate	(W. C. S. Amer.) bgs. 78,448 (naval prize)
Soda phosphate	(New York) brls. 132
Soda prussiate	(Rotterdam) eks. 12
Soda salicyl.	(U.S.A.) cs. 10
Soda silicate	(New York) 10
Soy	(Hong-Kong) eks. 100
Spill (Sicily)	27
Sulphur	(Catania) pkgs. 357, bgs. 2,633, brls. 280
Sulphuric acid	(New York) cs. 25
Tannic acid	(U.S.A.) brls. 44
Tartar	(Marseilles) 218, (Genoa) 182
Tartarie acid	(Marseilles) cs. 10, brls. 12, eks. 112, (Bari) brls. 184, (Genoa) eks. 40, brls. 160
Terpincol	(Marseilles) jars 5
Thorium nitrate	(Havre) cs. 10
Turmeric	(India) 875
Turpentine	(U.S.A.) brls. 4,700
Vanilla	(Colombo) cs. 3, (Bordeaux) cs. 11, (Havre) 8
Wax, bees'	(Delagoa Bay) 36, (via Marseilles) 288, (Morocco) 21, (Calcutta) 80, (Bombay) 5, (Lisbon) 177, (Leghorn) 12, (New York) 22, (Jamaica) 4
Wax, carnauba	(Bahia) 84
Wax, vegetable	(Kobe) 200
Witchhazel ext.	(N. York) brls. 50
Wood oil	(Hankow) eks. 705, (Marseilles) 30
Zinc oxide	(Rotterdam) 862, (New York) 2,542

Continental Drug and Chemical Markets.

The following notes deal with the Hamburg and Berlin markets up to December 23:

ANTIMONY.—The Government has fixed the price of Chinese crude at m.60 per 100 kilos. (December 14).

BALSAM TOLU is cheaper in Hamburg, there being no demand; prices range from m.7 to m.7.25 per kilo.

CAMPHOR (REFINED).—There is no trading without an official permit, as the Government has taken over all the stocks. Business is therefore reduced to extremely meagre proportions; from m.570 to m.775 per 100 kilos. are the quotations in the wholesale trade (Berlin). Japanese tablets are quoted m.725 to m.750 per 100 kilos.

CITRIC ACID. There is practically no demand, and with large stocks m.475 per 100 kilos. is quoted.

COPAIBA BALSAM has not changed since the outbreak of war, m.3 to m.4.50 per kilo. being quoted.

ERGOT.—Inactive, and prices lower, with business in fair Russian at m.675 per 100 kilos. (Hamburg, December 15.)

GUM ACACIA.—With a fair demand stocks continue to decrease, ordinary Sudan sorts offering at m.130 per 100 kilos.

HEXYMETHYLENETETRAMINE.—Early in December a large demand suddenly set in, and the price advanced considerably, m.460 per 100 kilos. being quoted. Later, the active demand led to a further advance, from m.490 to m.500 per 100 kilos. being quoted.

MANGANESE is becoming scarce, the price for 80-per-cent. powder being from m.18 to m.22 per 100 kilos. (Berlin, December 13.)

METALS.—Maximum prices have been fixed by the Government for copper, brass, bronze, aluminium, nickel, antimony, tin, etc.

OILS (FIXED) AND FATS.—Stocks continue to diminish rapidly, and prices continue to advance almost daily. Linseed (Hamburg) is very scarce at m.97, Dutch m.91.50. Rape also very scarce, at m.150 for crude and m.153 for refined. Refined Cottonseed, m.100. Hankow Wood oil, m.100; Palm-kernel, m.140; Lagos Palm, m.120; Cocanut, Cochin m.180, and Ceylon m.180, with great scarcity. Whale oil has advanced considerably, from m.72 to m.80 in a week. Castor remains high, and the demand has fallen off; a few barrels of first-pressing are offered at m.260, and second-pressing at m.225. Glycerin may only be sold on behalf of the military authorities. Stocks of Soya-bean oil and Tallow are very small, and Fatty Acids are in large demand.

QUILLAIA.—Whole is unobtainable, and cut is m.110 per 100 kilos.

SENNA.—Hamburg stocks have considerably decreased; from m.90 to m.110 per 100 kilos. has been readily paid.

SHELLAC is tending firmer again on account of increased demand; usual TN Orange is quoted m.210 per 100 kilos.

TONKA-BEANS have been in fair demand, but as the stocks at Hamburg are large, prices have not advanced.

New Zealand Kauri Gum.

In March 1914 a Commission was appointed by the New Zealand Government to inspect and classify the kauri-gum reserves in Auckland, and a report of twenty-three foolscap pages, containing much valuable information, has now been issued. As evidence of the work accomplished, all the main centres were visited by the Commission, thirty-three meetings were held, and 139 witnesses were examined, full details of the evidence taken being given in the report. An interesting description of the kauri-gum lands of the Northern Peninsula is given, in which it is stated that "for thousands of years these vast kauri-forests lived and died, and from the dead timber and prolific vegetation these huge gum-bearing swamps, thousands of acres in extent, have been built up generation after generation. The kauri-tree, as is well known, was slow-growing, and took as long as 500 years to reach a state of maturity; indeed, it is estimated that there are some living specimens in the kauri forests to-day of the remarkable age of 3,000 years. . . . Much of the gum, although of an almost imperishable nature, must have decayed, for it has been proved that the kauri peat, of which the swamps are composed, has absorbed some of the essential oil of the decayed gum."

In a short geological description it is suggested that sand-drifts have gradually killed the vegetation and sounded the death-note of the kauri forests of each particular area. At one period magnificent kauri forests covered many parts of the Northern Island, where now nothing but swamp and lake exists. The best gum is found on land at Parengarenga, covering 80,000 acres, where it is dug from the sandy hillsides and sandy flats at depths varying from 2 ft. to 14 ft. Another tract stretches forty miles, from Ngataki to Ahipara Bay, which yields the poorer grades of gum which are in increased demand. In these particular fields the majority of the workers are now carrying on their operations. The origin of the kauri-gum industry is told at length in the report. Briefly put, it is as follows: In the early days of settlement the industry was the mainstay of the pioneer farmers, and many people followed gum-digging as a regular occupation, and the output steadily increased, until in 1891 the exports were 8,388 tons, valued at 437,056£. With increased prosperity from dairy and sheep farming, however, the digging became more or less a secondary occupation, when some thirty years ago a small band of immigrants, principally Dalmatians and Croatians, arrived in New Zealand and found their way on to the northern gum-fields. With frugal living and working hard they eventually returned to their native land comparatively rich men, and thus spread the fame of the gum-fields. There are now fully 5,000 of these so-called Austrians, and it says well for their patriotism to the British Empire that they refused the call to their Colours on the outbreak of the European war. This large influx of labour resulted in over-production, and a slump, which was keenly felt, ensued. In 1898 the Kauri-gum Industry Act was made law, and as a result an area of over a quarter of a million acres of Crown land was permanently set apart as kauri-gum reserves, and licence-fees were fixed. An outstanding fact in the report is the hazardous manner in which the Crown gum-lands have been administered in years gone by—e.g., the gum-digger had an area of nearly half-a-million acres to wander over at will, and the unrestricted digging of holes of all sizes and shapes, and the effect of successive fires, have done irreparable injury to the land, in addition to destroying gum-deposits of considerable value. At the time the report was written this serious injury to the land was proceeding, but suggestions are now made for proper control to be exercised. There are still large areas of land which can be dealt with in a systematic manner, both with advantage to the digger and with profit to the State. Among the suggestions recommended by the Commissioners is that the checking of sand-drift on the peninsula north of Ahipara, affecting 100,000 acres of Crown lands and 200,000 acres of private lands, is a matter for serious consideration. Evidence on this point was tendered by many farmers showing how the land had been obliterated by sand-drifts; afforestation of certain areas is recommended. Another suggestion is that a Department be set up to deal with the kauri-gum industry generally, and that an export-duty of 1/- per ton be imposed on kauri. The report gives a table of exports from 1891 to 1913, the latter year showing shipments of 8,780 tons, valued at 549,106£.: the highest recorded figures were 11,116 tons in 1899, and the lowest 5,531 tons in 1908.

Since writing the above the report has been discussed in the New Zealand Parliament, but no recommendations have yet been made. It appears doubtful if the export-duty suggested will be levied.

Our American Letter.

(Special Correspondence to the "C. & D.")

Prescription Abbreviation.—A fatal accident has occurred at Baltimore through dispensing barium sulphide when barium sulphate was required. The chemical was required for lining the stomach and intestines previous to an x-ray examination. The doctor's prescription specified "barium sulph."

A La Boots.—The highest number of retail drug-stores owned by one body in the United States is 105, that being what the Riker-Hegeman Corporation, New York, have. The Louis K. Liggett Co., Boston, comes next with fifty-two. Then the Owl Drug Co. and the Square Drug Co. have each twenty, and only seven others have double figures. Of what are called co-operative manufacturing and jobbing corporations, the American Druggists' Syndicate, of New York, is the biggest, with 16,000 retailers as customers, and the United Drug Co. (Rexall) comes next with 5,000.

Drug-cultivation.—The interest taken in this subject has been increased by the scarcity in European-grown medicinal plants owing to the war. Belladonna-culture is favoured. A special report by Mr. A. F. Seavers, of the Department of Agriculture, on the germination of belladonna-seed is printed in the "American Journal of Pharmacy" for November, and a further paper on belladonna and hyoscyamus by Mr. E. L. Newcombe is given in the December issue. The Department of Agriculture has also published a monograph on the cultivation of golden seal, which plant, owing to its scarcity, could be profitably grown. It is stated that the details of the cultivation are similar to ginseng, but that hydrastis is less difficult to grow.

Wood-spirit is used in large quantities in the United States. According to a bulletin issued by the Health Department, 8,000,000 gals. was made in 1910, and there are 2,000,000 people working in trades in which it is used. A warning is given as to the danger of using wood-spirit in toilet-preparations, and also of the symptoms that are likely to be caused in workmen using wood-spirit in insufficiently ventilated positions.—The Board of Health, New York City, has prohibited the sale or possession of any food, drink, or medicinal or toilet preparation containing wood-spirit, no matter how small the proportion. When the spirit itself is sold it has to bear a poison-label with skull and cross-bones, and an intimation that it is unlawful to use the product in food, beverage, or medicinal or toilet preparations intended either for external or internal use.

Dye Problems.—Reference has been made in the *C. & D.* to the steps taken to import aniline dyes from Germany. Cargoes have already been delivered in the United States, and have relieved the difficulties of the dyeing-industry. The New York Section of the American Chemical Society discussed the question of the manufacture and supply of aniline dyes, and appointed a Committee to investigate the matter. This Committee has issued an interim report, without, however, coming to any definite conclusion. It is stated that there are four factories in the United States engaged in the manufacture of aniline dyes. The "New York Commercial" reports that plant for the manufacture of aniline dyes is to be erected near Chester, Pa., by the Benzol Products Co., of Philadelphia, which is backed by capital said to exceed \$100,000,000. Manufacturers of textile goods have been hard pressed recently to secure dyestuffs, especially aniline oil. Mills in Philadelphia and vicinity have been compelled to close, owing to the scarcity of dyes, or to decrease the number of working hours. The concern, which will cover seventy-five acres, is to employ about 2,000 skilled workmen.

H. G. WELLS, in "The Wife of Sir Isaac Harman," makes one of his characters say: "He had long observed with a certain envy the admirable advertisement such firms as Lever and Cadbury and Burroughs & Wellcome gained from their ostentatiously able and generous treatment of their work-people, and it seemed to him conceivable that in the end it might not be at all detrimental to his prosperity to put his hand to this long-neglected piece of social work."

"CHARPIE" FOR LINT.—A doctor, writing to the "Hamburger Nachrichten" with the consent of the medical staff of the 9th Army Corps, states that there is an enormous quantity of bandage-material in Germany in the shape of "charpie," the advantages of which, he says, are its capacity of absorbing large quantities of fluid and not adhering to wounds; and, with modern means of sterilising and antiseptic methods, there is no reason why it should not replace lint—an exceedingly scarce commodity with the Germans.



Memoranda for Correspondents.

Communications should be accompanied by the names and addresses of the writers, otherwise they cannot be dealt with. Queries by subscribers on dispensing, legal, and miscellaneous subjects connected with the business are replied to in these columns if they are considered to be of general interest. Correspondents are requested to write each query on a separate piece of paper. Every endeavour is made to reply to queries without delay, but insertion of the replies in "the next issue" cannot be guaranteed, nor, as a rule, can they be sent by post. Letters submitted for publication (if suitable) should be written on one side of the paper only. Their publication in "The Chemist and Druggist" does not imply Editorial agreement with the opinions expressed, even when the writers use a "nom de plume."

Complete and systematic indexes of the "C. & D." are presented with the last issues in June and December each year. Every subject dealt with week by week is included, and correspondents are advised to refer to these and the "C. & D. Diary" before asking the Editor for information, so as to save time.

1898 : Laudanum : 1914.

SIR,—Seeing that the retailing of laudanum, B.P. 1914, with the compulsory signing of the Poison Register, is likely to result in confusion and danger to the public, and much inconvenience and annoyance both to the public and the chemist, and is causing general discontent in the trade, I have decided (for the present, at any rate) to continue the sale of the B.P. 1898 preparation in preference to the new B.P. 1914, and to use the accompanying label, unless the 1914 laudanum is specially demanded and customer is known:

LAUDANUM—POISON.
B.P. 1898.

Adult Dose.—5 to 10 minimis.

Note.—This is the same strength preparation as used by the public for many years. The new one (B.P. 1914) is much stronger and is more dangerous, and cannot be sold without signing the Poison Register.

A. STOOKE, M.P.S.,
Pharmacist and Chemist,
166 High Street, Gillingham, Kent.

By so doing, the dose remains the same as usual, and the necessary verbal explanation at each sale, to conform to the House of Lords' decision (to prevent substitution without notice), will cause much less annoyance and waste of time to all parties concerned than having to sign the Register. Adherence to the B.P. is all very well in dispensing, but in the retail trade it is very embarrassing, with the frequent alterations, which are often not improvements.

Yours truly,

ARTHUR STOOKE.

[As pointed out in an editorial note on p. 49, labelling alone does not suffice to legalise sale of 1898 laudanum; before retail sale is completed the seller must bring to the knowledge of the customer the "nature, quality, and substance" of the article sold.—EDITOR C. & D.]

Sale of Laudanum in Mixtures.

SIR,—In view of the fact that tincture of opium will be included in the first part of the Schedule on and after January 1, as you have pointed out for several months, how, in your opinion, will retailers stand when the ordinary customers desire to purchase their pennyworths of laudanum, either mixed with essence of peppermint, oil of anise, and all the rest, or as laudanum pure and simple? While tincture of opium, 1898 and 1885, was in the second part of the schedule, it was not necessary for the seller to know the purchaser personally. Signing a name, either correct or fictitious, in a book is of little use if personal acquaintance with the buyer is not existent. I would appreciate an expression of opinion from you as to the proper position to take up when people want to buy their pennyworth of ingredients for their pet cough or diarrhoea mixtures which contain laudanum. The step taken by the G.M.C. is a good one, for it leads to the adoption of the

principle of State pharmacy advocated by me in May last under name "Reg. Chemist, No. 10,321." I was especially pleased to read in last week's issue that "Xrayser II." appears to favour the restriction of the number of drug-shops in accordance with the population in any given area. Things are moving along in the right direction.

Yours, etc.,

G. E. O. (288/9.)

[This matter is dealt with in an editorial note on p. 49.—*EDITOR C. & D.*]

Square Men in Round Holes.

SIR.—Though I cannot agree with all that "Xrayser" says in his paragraph about the Pharmaceutical Society, I yet find myself in substantial agreement with him. I do not like the facile assumption (as if it were an axiom) that because an idea is what he calls "progressive," it is for ever desirable. But I do agree that "progressive"—or, shall we say, thoughtful?—pharmacists, too often regard the Society with derision, making her the starting-point of many jokes, excellent and otherwise. Though I plead guilty of much of this derision, I make the admission more in sorrow than in anger, for truly this is quite as it should not be. Every decent pharmacist must confess to a lurking affection for the official Society; she is the one bond of union whence springs our *esprit de corps*, the sign and symbol of the fraternity. We hanker after regarding her as our *alma mater* (so to say), and truly she ought to be the mother of us all. But is she? Rather, I am afraid, is she too frequently a sort of blind, crazy, and decrepit grandmother, refusing to recognise her offspring as such; for, apart from her innate conservatism, which is at least no unmixed evil, she suffers from what one may call cliqueomania; by which I mean that if, e.g., you are an "Old Square Man," or if you have the sagacity or cunning to incorporate yourself among the right clique, then much pharmaceutical success and something like a pharmaceutical career are open to you; but, alas! not otherwise. There is no question of individual excellence involved in catching the eye and gaining the patronage of the Society; it appears to be solely a matter of caucus, clique, backstair influence, wire-pulling—what you will. Above all, you must begin by being an Old Square Man. For example, I have in mind an exceedingly vain, vacuous, and pompous pharmacist, quite uncultured, innocent of particular ability or accomplishments, but one who, thanks to the spurious advantages I have named, was made much of by the Society, receiving in generous measure what encouragements and patronage and pleasant posts the Society had to offer, and who was rendered thereby still more pompous, haughty, and silly—a simple shopkeeper with the airs of a Cabinet Minister, a pharmaceutical Malvolio, and the butt of all the yis! One case out of many. True, there are many brilliant men associated with the activity of the Square; I know and honour many such. But no honest man can pretend that the Society is representative of anything like a large percentage of the brains of pharmacy, or even that she makes an attempt, however feeble, to be so representative, as in plain truth she ought. Indeed, it is quite the reverse. Brilliant pharmacists, unless caught early and enrolled within a clique, too soon find out the truth about the Society and become, as "Xrayser" says, derisive, cynical, and hostile. Instead of the constant infusion of new blood from all portions of the body pharmaceutical, one finds, for example, the same distinguished coterie figuring as examiners again and again; the same old set being used over and over again, in all sorts of combinations, like a well-thumbed pack of cards, for all sorts of purposes. These things are more easily diagnosed than remedied. One mentions them with much diffidence and with sincere regret. One remedy, truly—more easily said than done—would be the formation of a new body, with the functions of a trades-union, really representative of pharmacy and capable of winning for pharmacy her just emoluments, with the sure alternative of a strike. And yet one would prefer to see the old Society reformed. Is such a thing possible? One wonders.

I am, Sir, faithfully yours,

M. P. S. (210/56.)

"Look facts in the face," said the *C. & D.* in their annual "Greeting to the Trade" last week. Well, let us look at a few in last week's issue.

First, in Mr. Gilmour's letter about the drug-trade in 1868 he says: "Mr. John Mackay (Edinburgh) expounded the Pharmacy Act . . . at great length . . . and specifically repudiated the impression that the Act compelled the qualification of the assistant."

Second, "Xrayser" comments on Mr. Adamson's paper at Edinburgh Assistants' Association, December 1914, in which Adamson says we need a new policy as follows: (a) Look after apprentices; (b) shorten the hours; (c) restrict

the number of chemists; (d) get 20 per cent. profit on patents; and (e) compel the *N.I.* to pay 100 per cent.

Third, a good old business is advertised in the Supplement, and the advertiser says: "No offer, however low, but will receive consideration."

The men of 1868 knew that the profits were so small in the gross that they could not afford to pay for specially qualified labour on a high-falutin' basis; nor can we in 1915. But that does not mean total neglect of apprentices.

It is forty-six years since November 1868: it is only one year since the Pharmaceutical Society woke up (like Rip Van Winkle) and shifted the Latin incubus from the first examination to the second, in spite of the wailing of a small but noisy clique. I am hoping, perhaps vainly, that the Society will go ahead with other reforms long overdue, and I am glad to see young men like Mr. Adamson saying out loud what many thousands have been thinking, but fearing to say, for twenty years. "Lead on, Macduff Adamson!" Don't let the prigs who talk about "lowering the craft" stop you. Smite every fool-head as it bobs up. There's still plenty of money to be made in the drug-trade, and it makes me take heart to see a new generation writing like Mr. Adamson. The trade of Great Britain is going to be something enormous, and a business-like drug-shop is still the most profitable retail trade. But we are carrying too many burdens: too many "old men of the sea" are choking us. Heave them off, I say, and drug-shops will sell at a fair and just price, instead of being given away, like the business in the *C. & D.* Supplement.

JAY MACK.

Excessive Prescribing.

SIR.—The proceedings of the London Panel Committee (for brief), as reported in your issue of December 19, suggest some very serious reflections to all who are interested in the working of the Insurance Act. I wish in particular to refer to the proposal to surcharge a medical man because of certain prescriptions. "Excessive prescribing" is a purely relative term, and each case must be decided as it arises; it is impossible to lay down a general rule. In one set of circumstances the prescribing of a particular drug might be excessive, in other circumstances it would be perfectly reasonable. In the case in question the insured patient was the victim of rheumatoid arthritis, from which he had suffered "for months and months." This is a disease which is notoriously difficult to eradicate, and the normal course hitherto has been for the sufferer to go from bad to worse till he is a helpless and hopeless invalid, who endures agonies of pain, and whose life is a constant burden to himself and all his relatives. Under the Insurance Act such a person is entitled to Sick Benefit for a lengthened period, and this must naturally include medicine of some kind or other, and the cost of the total benefits must run up to a sum far in excess of 7*l.* in a very few months. In such a case as this is it, or is it not, the duty of the medical man to prescribe something outside the Tariff if he has reasonable hope that the patient can be cured? The doctor in this case prescribed phylacogen, a remedy that is just now being advertised for the treatment of rheumatism, and after 7*l.* had been spent in the medicine the patient was cured, and I presume he went back to work. Apparently what decided the Committee not to surcharge the doctor was the fact that the expensive treatment had cured the patient after all other treatment had failed. But supposing the new treatment had failed, what would have been the position? No doctor is infallible, and no remedy is a cure-all, and no doubt phylacogen will be tried in cases that do not respond to the treatment; but surely every panel patient is entitled to the best remedies known to medical science, even if these are expensive. The application of any particular remedy must be left to the skill and discretion of the doctor, and if it unfortunately happens that the remedy fails, must the doctor suffer and the chemist have his account discounted? If this is to be the new reading of the code of humanity, we had better make it quite clear that wherever a patient dies the doctor will receive no fees and the chemist's bill will remain unpaid.

To the credit of London, let it be said that the Committee decided not to surcharge the doctor; and while they were wise in so deciding, I cannot help thinking that there ought to be some arrangement under which the cost of expensive drugs should not be charged entirely to the Drug Fund. In the case in question the patient would have been a drain on the funds of his Approved Society, possibly for months, and the use of the expensive drug has saved much of this. Since the Drug Fund will probably be exhausted, why should every chemist in London suffer, while the Approved Society reaps all the benefit? In every case of this kind the Approved Society stands to gain and the Drug Fund stands to lose by the use of the expensive drug. Why cannot there be some medium of communica-

tion between the doctor and the other parties, so that a fair division might be arrived at, without any doctor being stigmatised by his brother practitioner as being guilty of something "shameful"? In my way of thinking the shame lies elsewhere, and the man who made use of the expression should be shamed because he has disgraced an honourable profession.

Yours,
PHARM. CHEMIST. (204/7.)

Subscribers' Symposium.

For interchange of opinion among "C. & D." readers, and brief notes on business and practical topics, especially new ideas.

Suction Powder.

"The other day a youth asked me for 'Half an ounce of suction powder.' This gave me food for a few minutes' thought, but by a little questioning I elicited the information that 'it was for false teeth.' I was then able to supply what was wanted—pulv. tragacanth., which is used between the plate and the palate to fix the former more firmly in its place."—H. E. D. (190/56).

Ward's Paste.

Mr. W. Forster, F.C.S. (Seaham Harbour), suggests, in reply to Information Wanted (201/304), that Ward's Paste is meant by Wade's Paste, the formula for the former being:

Pulv. eubebæ	...	...	...	5ss.
Pulv. potass. nit.	...	...	...	5j.
Pulv. acaciaæ (vel farinæ)	...	...	...	3ss
Copaibæ	...	...	...	q.s.—Fiat elect.

The New B.P.

"Some week or two ago I ordered from my wholesale house a copy of the new B.P., in order that I might prepare by January 1 any of the new or altered preparations. Not receiving the precious volume, I asked my house to send it on at once, and received the reply that the publishers will not supply until January 1. The new B.P. has already earned for itself the nickname of 'The Wholesalers' B.P.', and your readers will agree that further comment is unnecessary."—J. H. P. Bolton (Winchmore Hill).

[The note issued by the publishers of the B.P. to those who are selling it says: "The British Pharmacopœia is delivered on the condition that under no circumstances will it be offered for sale or supplied before December 31, 1914." We may add that the book is supplied only on condition that it is sold at 10s. 6d. net.—EDITOR C. & D.]

Dispensing Difficulties and Notes.

Readers are advised to consult "The Art of Dispensing" in regard to compounding difficulties. We welcome fresh problems and invite the co-operation and correspondence of dispensers in their elucidation.

Emulsifying Lanoline and Vaseline.

E. H. (207/68) writes: "In last week's issue of the C. & D. a dispensing query appeared regarding the preparation of a lanoline-cream, and you stated that a satisfactory preparation could (in that case) only be made with the aid of soap. About two weeks ago we had a dispensing paper set, and one of five required preparations was as follows:

Lanolini	...	...	...	5j.
P. acaciaæ	...	...	...	3ij.
Aq. ad	...	...	...	5vij.

Fiat emulsio.

This I made by adding four or five drops of water to the acacia and making a very stiff mucilage. I then added all the lanoline at once, and rubbed to a homogeneous mass; next added two or three drops of water at a time, mixing well after each addition. It was here where success lay. When I had made 3 oz. or 4 oz., I added the rest of the water without any separation occurring, and a fine white emulsion, not separating in three hours, resulted. In twenty-four hours there was about half an inch of deposit at the bottom of the bottle, but it was all right on shaking. To ascertain whether it was a fluke or not, I tried again, having my weights checked, and was successful again. By this same method I have made fine white emulsions of vaseline and acacia."

Miscellaneous Inquiries.

We do not undertake to analyse and report upon proprietary articles nor to publish supposed formulas of them. When samples are sent particulars should be supplied to us as to their origin, what they are, what they are used for and how.

We do not as a rule repeat information which has been given in this section during the past twelve months, but give the reference to the issues in which the information may be found. If querists cannot refer to these they may obtain the numbers from the "C. & D." Office at the published price, usually 6d.

R. S. D. (136/45).—The best way to get a SITUATION ABROAD is to look in THE CHEMIST AND DRUGGIST Supplement weekly for any vacancies that may be advertised, and apply for them. Also you might advertise in the Supplement yourself, stating your qualifications and what you desire. There is no demand for young assistants who have not passed their teems.

J. H. L. (185/16).—Culinary essences, such as ESSENCE OF LEMON, are well treated in "Pharmaceutical Formulas," beginning p. 329. The essence of lemon commonly sold by grocers is made by shaking 2 oz. of oil of lemon with 18 oz. of rectified spirit, but sometimes spirit of less alcoholic strength is used, such as a mixture of rectified spirit 2 volumes and distilled water 1 volume. Terpeneless oil is sometimes used.

W. H. M. (195/6).—The prospects of employment for GIRLS as dispensers has been affected by the National Insurance Act, in so far as many medical practitioners in England and Wales have had their dispensing practice much reduced, so that it is unnecessary for many of them to employ dispensers. It is, in consequence, undesirable that any girl should enter the dispenser's calling, unless she is prepared to proceed to the qualifying examination under the Pharmacy Act, 1868, and this means at least three years' training (preferably an apprenticeship with a registered chemist) and a course of tuition in a school of pharmacy, with a view to passing the Minor examination, which qualification will entitle her, if so desired, to start in business on her own account. The short cut by way of the Apothecaries' Assistants' examination bars those who get that certificate from a good deal of possible employment, and it is the opinion of those with special knowledge in regard to dispensing and pharmacy as an occupation for women that the opportunities for either class are limited in comparison with the considerable number who have been encouraged by badly informed articles in women's papers to regard the occupation as profitable. In short, the supply of women dispensers and pharmacists is excessive compared with the demand.

Retrospect of Fifty Years Ago.

Reprinted from "The Chemist and Druggist," January 14, 1865.

The Pharmacy Bills.

That those who have not time to study the two Bills may form a correct judgment upon them, it should be remarked:

1. That the proposed Pharmacy Bill is intended to confirm the Pharmaceutical Society in the privileges and government conferred upon them by the Pharmacy Bill of 1852, and to give them, as a privileged order, a controlling power over all outside chemists and druggists.

2. That it leaves the great scandal of the trade—the sale of drugs and poisons by ignorant persons—untouched.

3. That it violates two great constitutional principles—viz., the vested interest every man has in his own business, and his right to a voice in the government of any institution he is compelled to support. Representation and taxation go together in this country.

4. That it degrades the most respectable and intelligent registered chemist to a position of inferiority to the most incompetent non-examined member of the Pharmaceutical Society.

5. That, whilst rendering the whole trade contributory to the aggrandisement of the Pharmaceutical Society, it offers nothing in return.

The Chemists and Druggists' Bill, on the contrary, provides a remedy for the evil of incompetent people selling drugs, which has been so emphatically denounced by Government; it interferes with no man's right in his own business, but places all chemists and druggists upon a level as citizens and tradesmen, whilst encouraging them to rely upon their own energy and talent for professional distinction; it gathers all non-pharmaceutical chemists into a common fold of incorporation, with mutual interests, equal rights, and a popular representation, and gives a pledge to the Government and to the country that, in a few years, every man dealing in drugs and poisons shall be an educated and competent chemist.

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These products are made by the Ammonia Process, and are distinguished from others by their great purity.

Bicarbonate
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This Bicarbonate answers all the requirements of the British Pharmacopœia. It is a pure, refined, and recrystallised salt, particularly free from metals or any base other than soda. This sodium bicarbonate is specially suitable for the preparation of granular effervescent preparations and salines, seidlitz powders and baking powders, and is well adapted for other medicinal and domestic purposes. It is the purest and cheapest sodium bicarbonate made.

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This sodium compound (sodium sesquicarbonate) is a variety of carbonate of soda in small silky crystals, containing much less water than ordinary washing soda ; 1 lb. of it does the work of 2 lbs. of washing soda. Concentrated crystal soda is excellently suited for chemists' trade ; they can make a speciality of it, and it is also suited for making water-softeners, brush powders, hair-wash powders, and the like.

Pure Alkali.
58 Degrees.

A dry, white powder : dissolves quickly and easily in water, making an excellent detergent for use by printers, bleachers, dyers, and for bottle washing. Is nearly equal to 99 per cent. carbonate of soda ; is much used by glass, paper, and soap makers. The best alkali for soap powders and washing powders.

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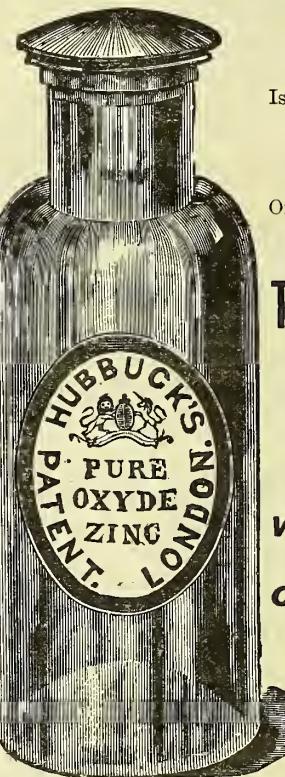
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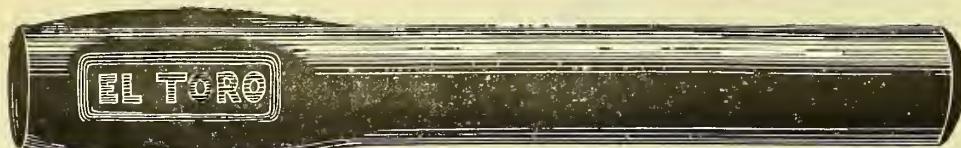
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“All the cases (8) are proved cases, i.e. the Bacillus of Tuberculosis has been discovered in them—they were also extensively affected—both sides, and in the majority all five lobes. With treatment on ordinary lines one would not expect much benefit in these cases, specially when one considers that the home conditions are, with few exceptions, bad, and that they are not able to obtain a regular supply of good nourishing food. However, all the cases have shown some improvement, which in some is more marked than others, and although it is early to claim them as permanent cures, I have not the slightest doubt that with perseverance in the treatment they will become so. In my opinion we have in Pneumosan a very powerful ally in our struggle against tuberculosis.”

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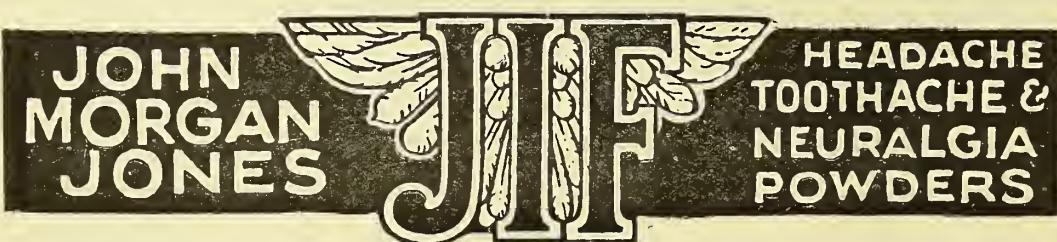
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3½d. boxes (4 oz.), 2/6 dozen.



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N.B.—We would draw attention to the fact that all prices quoted herein are subject to alteration without notice, and that where stocks are limited preference is always given to our regular customers.

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 Oss. Sepia Pulv., 1 cwt. @ 6d. lb.; 7 lbs. @ 7d. lb.
 Otto Rose, finest, 1 oz. @ 50/- oz.; No. 2, 1 oz. @ 30/- oz.
 Oxymer Sella, B.P. 5 cwt. @ 34/6 cwt.; 1 cwt. @ 36/6 cwt.; 7 lbs. @ 7d. lb.
 Papain, 1-80, 1 oz. @ 1/9 oz.
 Paraffinum Durum, B.P., 2 cwt. @ 3d. lb.; 1 cwt. @ 3½d. lb.; 56 lbs. @ 3½d. lb.; 7 lbs. @ 4½d. lb.; Molle Flav., B.P., 3½ cwt. @ 21/- cwt.; 1 cwt. @ 32/- cwt.; 28 lbs. @ 4½d. lb.; 7 lbs. @ 4½d. lb.; A.B.P., 3½ cwt. @ 63/6 cwt.; 28 lbs. @ 8d. lb.
 Paraldehyde, B.P., 7 lbs. @ 7/10 lb.; 1 lb. @ 8/3 lb.
 Pepsin, B.P., 1 lb. @ 13/- lb.
 Phenacetin, P.B., pulv., 7 lbs. @ 7/- lb.; 1 lb. @ 7/3 lb.
 Phenazone, P.B., 7 lbs. @ 10'/6; 1 lb. @ 11/- lb.
 Phenolphthalein, 7 lbs. @ 9/- lb.; 1 lb. @ 9/6 lb.
 Pix. Burgundy, Druggists', 1½ cwt. @ 26/6 cwt.; 7 lbs. @ 4½d. lb.
 Plumbi Acetas, Druggists', 1 cwt. @ 45/- cwt.; 7 lbs. @ 6½d. lb.; Powder, 1½d. lb. extra.
 Podophyll. Resina, P.B., 1 lb. @ 13/- lb.
 Potassa Caustica Sticks, P.B., 6 1-lb. Bots. @ 2 6 lb.
 Potas. Acetas. Gran. P.B., 28 lbs. @ 1/5 lb.; 7 lbs. @ 1/6 lb.
 Potas. Bicarb. Pulv., 1 cwt. @ 55/- cwt.; 7 lbs. @ 6½d. lb.
 Potas. Brom. P.B., 1 cwt. @ 3/3 lb.; 28 lbs. @ 3/6 lb.; 7 lbs. @ 3 8 lb.
 Potass. Chlor. Pulv., 1 cwt. @ 8½d. lb.; 7 lbs. @ 9d. lb.
 Potass. Clt., B.P., 7 lbs. @ 2/11 lb.
 Potass. Cyanidum, 98%, 1 cwt. @ 2/2 lb.; 7 lbs. @ 2/4 lb.
 Potass. Iod. P.B., 1 cwt. @ 12/10 lb.; 14 lbs. @ 13/4 lb.; 3 lbs. @ 14/- lb.
 Potass. Metabisulph., 7 lbs. @ 1/3 lb.
 Potass. Fermanig. Cryst., 7 lbs. @ 1/5 lb.; large cryst., 7 lbs. @ 1/9 lb.
 Potass. Prussias Flav., 7 lbs. @ 1/5 lb.
 Pulv. Cretar. Arom., P.B., 14 lbs. @ 7d. lb.; c. Opio, B.P., 7 lbs. @ 1/9 lb.
 Pulv. Glycyrrh. Co., B.P. (Green), English Ground, 56 lbs. @ 44/- cwt.
 Pulv. Ipecac. Comp. P.B., 1 lb. @ 5/3 lb.
 " Jalap Comp. P.B., 1 lb. @ 1/9 lb.
 " Rhei Comp. P.B., 1 lb. @ 1/2 lb.
 Quassia Chlps, 1 cwt. @ 13/6 cwt.; 28 lbs. @ 2d. lb.
 Quinine Bisulph., 25 oz. @ 1/5 oz.; 10 oz. @ 1/6 oz.
 Quinine Ethyl Carb. (Tasteless), 10 oz. @ 2/4 oz.
 Quinine Hydrobromas, B.P., 25 oz. @ 1/8½ oz.; 10 oz. @ 1/2½ oz.
 Quinine Hydrochlor., B.P., 25 ozs. @ 1/8 oz.; 10 ozs. @ 1/9 oz.
 Quinine Sulph., B.P., 100 oz. @ 1/2 oz.; 25 oz. @ 1/3½ oz.; 10 oz. @ 1/4 oz.
 Rad. Gentian, English Ground, 1 cwt. @ 47/6 cwt.; 7 lbs. @ 6d. lb.
 Rad. Glycyrrh. English Ground, 1 cwt. @ 33/- cwt.; 7 lbs. @ 4½d. lb.
 Rad. Ipecac. Rio., 7 lbs. @ 14/-; 1 lb. @ 14/3.
 Rad. Jalap, English Ground, 28 lbs. @ 1/3½ lb.; 7 lbs. @ 1/4½ lb.
 Rad. Rhei, E.I. English Ground, 1 cwt. @ 1/3 lb.; 28 lbs. @ 1/6 lb.; 7 lbs. @ 1/7½ lb.
 *Minimum quantity at these prices; Home Trade, 3 Winchester Quarts assorted;
 NOTE.—Only terms Net Cash with order without discount, or orders accepted through London Merchants or Bankers.
 Goods carriage forward; all packages free; Export cases extra.

- Rad. Rhei. E.I. Trimmed, 7 lbs. @ 5/3 lb.; 1 lb. @ 5/3 lb.
 Resorcin, B.P., 7 lbs. @ 6/6 lb.; 1 lb. @ 7/- lb.
 Saccharine, 7 lbs. @ 26/- lb.; 550 or 500 1 lb. @ 27/6 lb.; 330 7 lbs. @ 24/- lb.; 1 lb. @ 25/6.
 Sacchar. Ust., 1 cwt. @ 26/6 cwt.; 10 lbs. @ 4½d. lb.
 Safron. Valentina, B.P., 7 lbs. @ 40/- lb.; 1 lb. @ 41/- lb.; 1 oz. @ 2/10 oz.
 Sal. Acetos., 7 lbs. @ 9d. lb.
 Salicinum, B.P., 1 lb. @ 16/10 lb.
 Salol, B.P., 1 lb. @ 6/3 lb.
 Sang. Draconis, pulv., English ground, 1 cwt. @ 2/1 lb.; 7 lbs. @ 2/3 lb.
 Santoninum, P.B., 8 oz. @ 235/- lb.
 Sapo. Cast. Alb., 10 cwt. @ 30/- cwt.; 2 cwt. @ 31/6 cwt.; 7 lbs. @ 4½d. pulv., 1 cwt. @ 85/- cwt.; 56 lbs. @ 88/- cwt.; 7 lbs. @ 10d. lb.; Animal pulv., 1 cwt. @ 70/- cwt.; 56 lbs. @ 72/- cwt.; 7 lbs. @ 9d. lb.
 Scammony Resin, Pulv., B.P., 7 lbs. @ 3/6 lb.; 1 lb. @ 4/- lb.
 Shellac (Orange), 1½ cwt. @ 68/- cwt.; 7 lbs. @ 9 lb.
 Soda Caustica, 28 lbs. tins @ 8½d. lb.; 6 1-lb. bots. @ 10d. lb.
 Soda Cit., B.P., 3 lbs. @ 3/2 lb.
 Soda Sulphite, Recryst., 1 cwt. @ 17/6 cwt.; 7 lbs. @ 4d. lb.
 Soda Sulphocarbonas, B.P., 7 lbs. @ 1/4 lb.; 1 lb. @ 1/7 lb.
 Soda Bromid., P.B., 7 lbs. @ 3/6 lb.
 Soda Hyposulphite, pea cryst., 1 cwt. @ 15/- cwt.
 Soda Salicyl. Pulv., 4 lbs. @ 6/- lb.; phys. pur., 1 lb. @ 6/6 lb.
 *Spt. Ether Nit. P.B., 4½ lbs. @ 3/8½ lb.; 1 lb. @ 3/11½ lb.
 * " Ammon. Aromat., P.B., 5 lbs. @ 2/11 lb.
 * " Chloroform, P.B., 5 lbs. @ 3/8 lb.
 Strontia. Bromid., 7 lbs. @ 4/6 lb.; 1 lb. @ 5/- lb.
 Strychnina Cryst. B.P. 4 oz. @ 2/1 oz.; Hydroch. and Sulphate, 2d. oz. less.
 Sugar of Milk, P.R., 1 cwt. @ 80/- cwt.; 7 lbs. @ 9d. lb.
 Sulphonial, P.B., 1 lb. @ 13/- lb.
 *Syr. Aurant. P.B., 7 lbs. @ 10d. lb.
 * " Easton, B.P., 7 lbs. @ 1/2 lb.
 * " Ferri Iodid. P.B., 7 lbs. @ 1/5 lb.
 * " Ferri Phosph. Co., 7 lbs. @ 6½d. lb.
 * " Hypophosph. Co. B.P.C., 7 lbs. @ 10½d. lb.
 * " Pruni Virg. B.P., 8 lbs. @ 8½d. lb.
 * " Rhannii, 7 lbs. @ 11d. lb.
 * " Rhei, P.B., 7 lbs. @ 9d. lb.
 * " Scilla, P.B., 7 lbs. @ 6d. lb.
 * " Sennæ, P.B., 7 lbs. @ 9d. lb.
 * " Tolut, P.B., 7 lbs. @ 8½d. lb.
 Thymol, 1 lb. @ 26/- lb.
 Tinct. Aurantii Recens., B.P., 5 lbs. @ 3/6 lb.; bond, 8½d. Aquos, 10d. lb.
 *Tinct. Belladonna, B.P., 5 lbs. @ 3/- lb.; bond, 6½d. Aquos, 1/2 lb.
 *Tinct. Benzoin Comp., P.B., 5 lbs. @ 3/7 lb.; bond, 10d.
 *Tinct. Camph. Comp. P.B., 5 lbs. @ 2.8 lb.; bond, 6½d. Aquos, 1/1 lb.
 *Tinct. Cantharidis, P.B., 5 lbs. @ 4/- lb.; bond, 6d. lb.
 *Tinct. Capsici, B.P., 5 lbs. @ 2/10 lb.; bond, 6d. lb. Aquos, 10d. lb.
 *Tinct. Card. Comp., P.B., 5 lbs. @ 2/2 lb.; bond, 7½d. lb. Aquos, 1/- lb.
 *Tinct. Catechu, P.B., 5 lbs. @ 2/6 lb.; bond, 7½d. lb. Aquos, 1/- lb.
 Wax, Japan, 2 cwt. @ 62/6 cwt.; 7 lbs. @ 8d. lb.
 Zinci Oleat. Powder, B.P.C., 7 lbs. @ 2/- lb.
 Zinci Oxid., Wbitest and Lightest, B.P., 1 cwt. @ 52/6 cwt.; 28 lbs. @ 6d. lb.; 7 lbs. @ 7d. lb.
 " Sulph., pure, 1 cwt. @ 18/- cwt.; 28 lbs. @ 2½d. lb.
 " Sulphocarbonas, B.P., 7 lbs. @ 1/4 lb.; 1 lb. @ 1/7 lb.

Export, 12 Winchester Quarts assorted.
 Export cases extra.

ALLIANCE DRUG & CHEMICAL CO., LONDON.

Offices: 34 LEADENHALL STREET.

KINDLY DETACH THIS SHEET AND PLACE IT IN YOUR BUYING BOOK.

By Royal Warrant to
H.M. The King.



By Royal Warrant to
H.M. The King.

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ONE
Address.

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Address.

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CREWE. LTD. (CREWE)
HORSE, CATTLE, SHEEP & DOG MEDICINES.

LARGEST SALE IN THE WORLD.



DAY'S BLACK DRINK

Cures Colic or Gripes in Horses or Cattle, Scour and Weakness in all Young Stock, Blown Cattle and Sheep, Debility, Chills, and Low Condition in all Stock.

Price 1/8 per bottle.

DAY'S HUSKOLEIN.

Almost infallible for Tape Worms in Lambs and other Animals; for Husk or Hoose in Calves, Lambs, &c. A speciality for Worms in Horses and Colts.

6/6 per bottle.

DAY'S "ZOMO-SAL."

For Blood Disorders, Humours, General Weakness, Surfeits, Indigestion, Sterility, &c., in Horses and Beasts. Promotes Growth of Bone. Makes animals "fit" for Show or Sale.

In Canisters at 7/6, 20/-, and 40/-



DAY & SONS' "ORIGINAL" MEDICINE CHESTS

Price £1 4s., £2 4s., £5, and £10 10s.; Carriage Paid.

Arranged for Horses, Cattle and Sheep; Horses only; or to suit any class of stock.
WHEN ORDERING PLEASE STATE REQUIREMENTS.

The Chest Illustrated is similar to that at £5 and £2 4s.

Great Specialities.

ONLY GENUINE FROM

**DAY & SONS, CREWE, LTD.,
CREWE, ENGLAND.**
LIBERAL TERMS FOR FOREIGN BUYERS.

INGRAM'S

TRADE



MARK.

HOT WATER BOTTLES**BRITISH MADE BY BRITISH LABOUR.****FITTED WITH STOPPER.****GUARANTEED NOT TO SLIP OR LEAK.****GUARANTEE.**

INGRAM'S "ECLIPSE" HOT WATER BOTTLES are personally examined and tested under strict supervision as to the Quality of Rubber, Workmanship, etc., and we assure our patrons that with careful use in any climate, and storage under favourable conditions, these high-grade quality "Eclipse" Hot Water Bottles are warranted to give entire satisfaction, and will remain in a perfect state for a period of Two Years.

Instances have been brought to our notice of these quality Bottles having remained in good condition for as long a period as Five Years.

INGRAM'S "ECLIPSE" BOTTLES are made in all sizes, and can be supplied with Jug or Loop Handle. They are fitted with either Ingram's or Rowe's Patent Stoppers, both being guaranteed not to slip or leak. Either of the above Stoppers can be supplied with Cockburn's Pattern Attachment if required.

POINTED OBTAINABLE FROM ALL WHOLESALE HOUSES. POINTED

The "Eclipse" Hot Water Bottle is embossed with the facsimile Trade Mark as above, which is a Guarantee of Quality

Manufacturers : **J. C. INGRAM & SON, Hackney Wick, London, N.E.**

Indiarubber Hot Water Bottles.**BEST BRITISH MANUFACTURE.****REDUCED PRICES.****TOOCOOD'S SPECIAL QUALITY, Figs. 457 or 1474, with ROWE'S PATENT STOPPER.**

8×6	10×6	10×7	10×8	12×6	12×7	12×8	12×10	14×7	14×8	14×10	14×12
2/6	2/9	3/-	3/4	3/1	3/6	3/8	4/2	3,10	4/1	5/-	5/6 each.

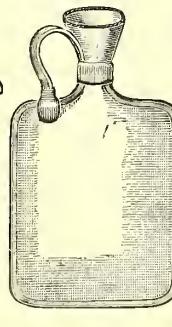
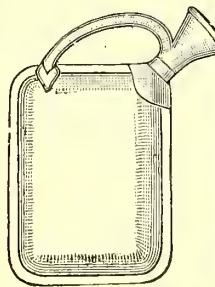
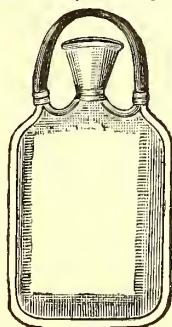
WARNE'S EXTRA SUPER QUALITY, Fig. 457, or BURBRIDGE'S PATENT, Fig. 458.

8×6	10×6	10×7	10×8	12×6	12×7	12×8	12×10	14×7	14×8	14×10	14×12	16×10	16×12
3/2	3/11	4/-	4/10	4/-	5/-	5/6	6/1	5/6	6/-	7/-	8/6	7/9	8/9 ea.

**William
Toogood,
LIMITED,**

**77 Southwark St.,
LONDON, S.E.**

'Phone—HOP 4170
(2 lines).



457

458

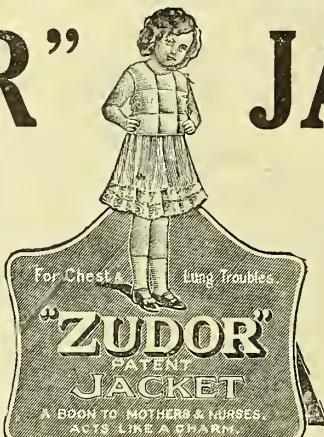
Special Terms in 1 doz.
lots and upwards.

**TOOCOOD'S
SPECIAL QUALITY,**
extra 5 %

**WARNE'S
EXTRA SUPER,**
extra 2½ %

"ZUDOR" JACKETS

A
Comforting
Chest
Protector



for Wearing
during
Chest
Affections.

Made in Two Qualities.

COTTON WOOL.

No.	Across chest.	Shoulder to waist.	Retail at
1	8 in.	6 in.	per doz. 6/- each 9d
2	10 in.	8 in.	7/6
3	12 in.	10 in.	9/-
4	15 in.	12 in.	10/6
5	19 in.	13 in.	12/-
6	21 in.	15 in.	15/-

Retail at

LAMBS' WOOL.

No.	Across chest.	Shoulder to waist.	Retail at
1	8 in.	6 in.	per doz. 8/- each 1/-
2	10 in.	8 in.	10/-
3	12 in.	10 in.	12/-
4	15 in.	12 in.	14/-
5	19 in.	13 in.	16/-
6	21 in.	15 in.	20/-

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Manufacturers of SURGICAL DRESSINGS
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JUST WHAT YOU WANT!!!

GLASS BOTTLES AT THE RIGHT PRICE.

We make Vials, Poisons,
all shapes and colours.
Special Ammonia Bottles
to meet the requirements
of the Act.
Winchesters, plain and
stoppered.
Mineral Water Bottles,
all kinds.

Perfumery Bottles, all
shapes and sizes.

BOTTLE EXPERTS,
any special shape or
colour made by our up-to-
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and Machinery.

Before placing your orders elsewhere ask your Merchant to consult or write to

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Telegrams:
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BOTTLES: :: YORKSHIRE MAKE ::



DISPENSING as illustrated, Plain
or Graduated.

1 1/4 oz.	3 & 4 oz.	6 & 8 oz.	10 oz.	12 oz.
7/9	8/-	9/-	13/-	14/6

16 oz. 20 oz.
19/6 21/- per gross.

GREEN PANELLED (three sides)
1/- per gross extra to above prices up to
8 oz., 2/- extra beyond.

GREEN PANELLED HEAVY (for
Cough Mixtures)

2 1/2 oz. 8/9; 5 oz. 10/- per gross.

POISON. Oval Ribbed, Pale Green (for Ammonia)

8 & 4 oz.	6 & 8 oz.	10 oz.	12 oz.	16 oz.	20 oz.
9/6	10/6	13/6	15/-	19/6	21/6

gross.

VIALS and HEXAGON POISONS at proportionately low prices.
TERMS: NET CASH 7 DAYS. CRATES 1/- EACH.
Carriage paid on 6 gross assorted crates up to 100 miles &c
Leeds (small extra charge beyond that distance).

THOMAS SWALES,
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THE MARVEL WHIRLING SPRAY SYRINGE

A Satisfied Customer is the

Druggist's Best Advertisement



IT IS A MARVEL

**Gold Medal Awarded—Paris, 1902,
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as the latest and best improvement in Vaginal Syringes. Particular attention is called to the fact that by reason of its peculiar construction the Marvel Syringe dilates and flushes the Vagina with a volume of whirling spray which smooths out the folds and permits the injection to come into contact with and cleansing the entire surface.



You can safely recommend it.

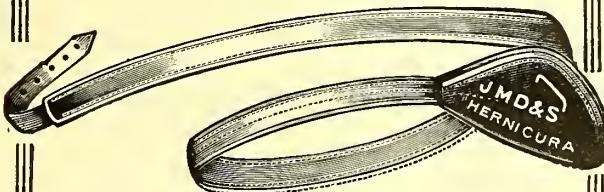
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You know

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Try

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TRUSS & SURGICAL APPLIANCE MAKERS,
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**GOLD MEDAL
BRITISH MADE**

HOT-WATER BOTTLES.

QUALITY GUARANTEED.

Also Special New

**LAMB'S-WOOL AND PLUSH COVERS
AND BAGS, LUNG PROTECTORS,
WINTER BODY BELTS, TRUSSES, &c.**

SEND FOR LIST, &c.
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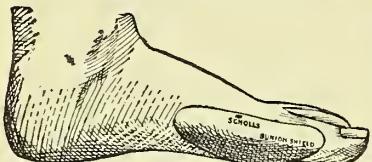
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PLEASE NOTE.

NO EXTRA STOCK.**NO RESPONSIBILITY.****NO TROUBLE.****HANDSOME PROFIT.**

Why not add to your income without trouble and without extra stock? There must be many among your customers who, known to you, wear an **ARTIFICIAL LIMB** or other **APPLIANCE**. Advise them to come to us. We are makers of the highest class of Limbs and Appliances, and no time or effort is spared to make each case a success. Simply send us a card to say that you have mentioned our name to Mr. or Mrs. ——, of ——, or send their name and address, and we will forward them a catalogue. In either case, should business result, we credit you with a substantial commission from 10 to 25% according to the nature of instrument supplied, and a cheque is sent on the 1st of the month following. We should be pleased to supply you with catalogues, in English, French, or German, for distribution, and give any information you may require.

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THE SCHOLL MANUFACTURING CO., Ltd.Largest Makers of Foot Appliances in the World,
1, 2, 3 and 4 GILTSPUR STREET, LONDON, E.C.**ELASTIC GUM SURGICAL INSTRUMENTS.**

Catheters and Bougies, in Black or Brown Gum, and Finest Silk Web. Specula, Rectal and Esophageal Instruments. Horse Catheters and Cattle Probangs. Wholesale and Export only. *Price List from the Manufacturers.*

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In various widths and qualities. Send for Samples, with Prices, and compare with any foreign production, to The Norwich Crepe Co. (1856), Ltd., St. Augustines, Norwich, who are acknowledged to be the only manufacturers in Great Britain.

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See pages 5 to 7.

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**15 GOLD MEDALS
16 GRANDS PRIX**

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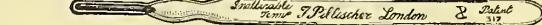
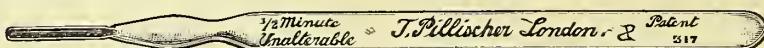
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**Celebrated
"Inalterable"
Maximum Clinical
Thermometer.**

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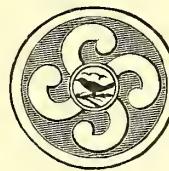
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1814

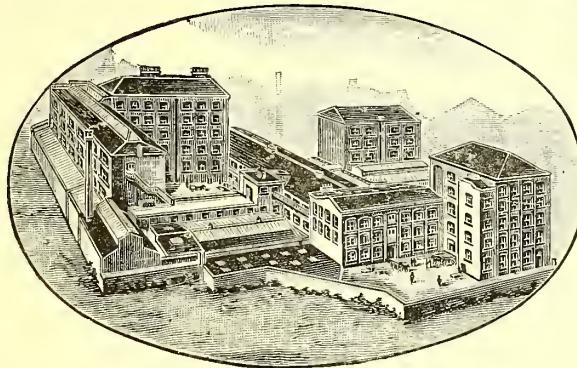


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Insure against misfortune,
Assure good fortune,
Ensure prompt dispatch

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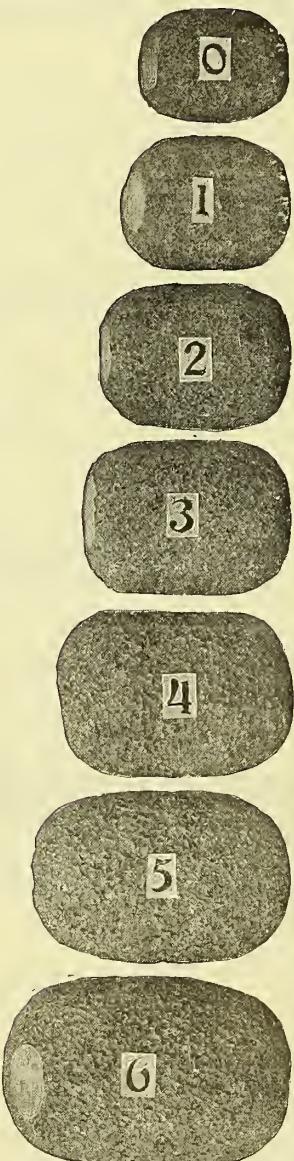
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thoroughly
sanitary
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harden.

**PROFITABLE
TO HANDLE.**

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SOLE IMPORTERS,
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J D SANTAL OIL CAPSULES

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ON THE P.A.T.A.

24 x 10 m. Capsules
in each box.

12/6 per doz.**Minimum Retail - 2/6 per box.**

Only the finest quality Oil of Sandalwood from East Indian Wood with a guaranteed Santalol content of 94/95% is used in the manufacture of these Capsules.

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**OVER 100 % PROFIT!
ENSURED & PROTECTED (P.A.T.A.)**

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One solution, nine shades.

A first-class article with an excellent demand, created entirely on its own merits, and carrying a first-class profit.

Size.	Minimum retail.	Minimum wholesale.
1/-	1/-	7/6
1/6	1/6	9/-
2/6	2/3	15/-
3/6	3/3	21/-

} per doz.
less 5%
discount

SPECIAL BONUS.

Buyers of 3 doz. bottles receive 3 bottles gratis (may be assorted and any size).

Do. 6 doz. do. 8 bottles gratis.

Do. 12 doz. do. 18 bottles gratis.

Equivalent in the case of the size in most general demand, viz. 1/6 size to 4/6, 12/- and 27/- respectively.

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SELF-FIXING & AIR-TIGHT
BOTTLE CAPS

PROMPT
DISPATCH

The Best Capping

in the World.

NO
INCREASE
in prices.
Apply now for Booklet
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The VISCOSÉ
DEVELOPMENT
CO., LTD.,
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Far superior to
Pleated Paper or
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ASPAD (Registered)
the new cure for
RINGWORM
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& all kinds of
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Diseases.

(PROTECTED BY P.A.T.A.)
PRICES.

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Aspad for Human use 1/1½ 10½d.	
" " (large) 2/9 2/1	
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Aspad " (½ gal.) 6/- 4/6	
Aspad " (½ gal.) 10/6 8/6	
Aspad " (1 gal.) 20/- 16/-	

Special Quantities. Special Quotations.

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PLEATED PAPER BOTTLE CAPS

THE BEST IN QUALITY AND CHEAPEST ON THE MARKET. 20 YEARS' REPUTATION.



Nos. 0, 1, 2, 3, 3b, 10, 20, 30 for Phials 4d. per gross.	Nos. 6, 6b, 60 for Pints 5½d. per gross.
" 4, 4b, 40 for 3 to 6 oz. Bottles ... 4½d. "	" 39 for Winchester Quarts ... 7d. "
" 5, 5b, 5½, 50 for 8 to 10 oz. Bottles 5d. "	" 8, Long for Wines... ... 9d. "

ELASTIC BANDS : Small, 3d. per gross; Large, 4d. per gross.

Also MANUFACTURERS of DISH and DESSERT PAPERS,
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DARTER, WILKINSON & CO.,

23, 24, 25 Sandland Street, and
3, 4, & 5 Gray's Inn Passage High Holborn, LONDON, W.C.

STIPENDUM CORK STOPPERS

in
all sizes
suitable for
KALIS, CITRATES,
DISPENSING, and all
FLUIDS.

STIPENDUM COVERED POTS

THE BEST FOR FACE AND TOOTH POWDERS,
PASTES, AND OINTMENTS.
GREASE PROOF.

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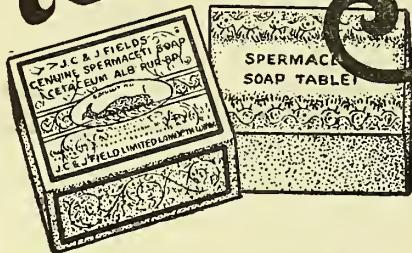
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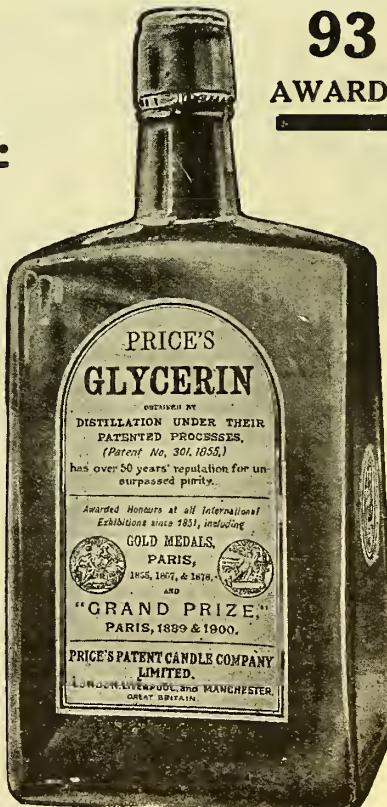
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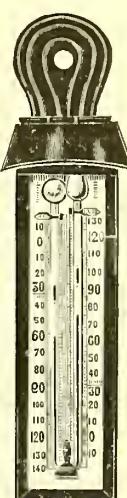
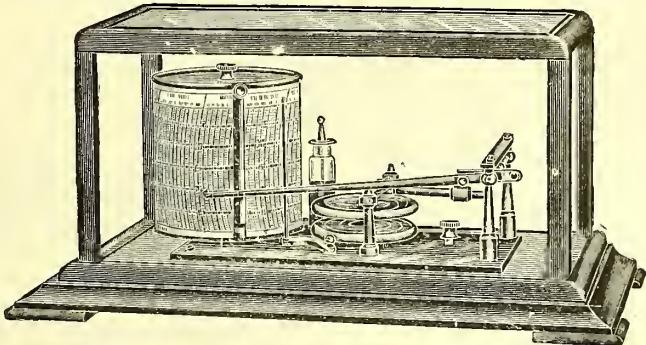
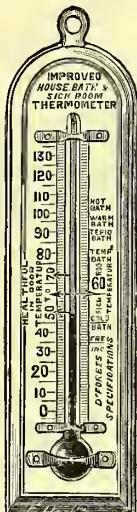
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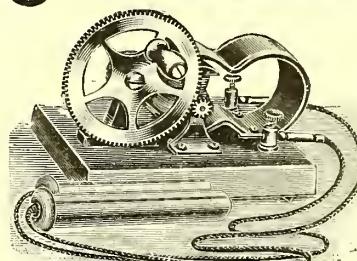
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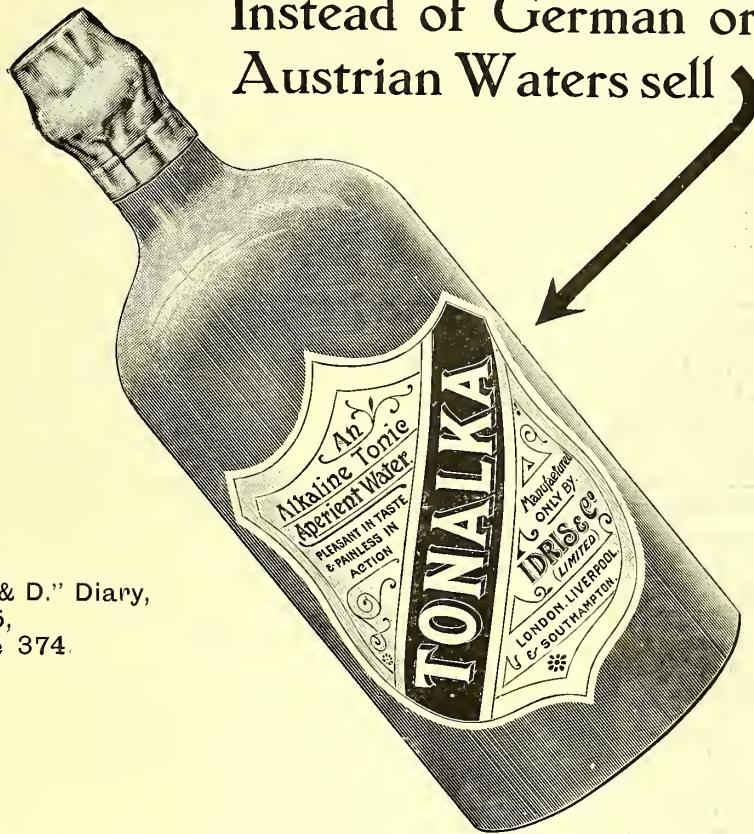
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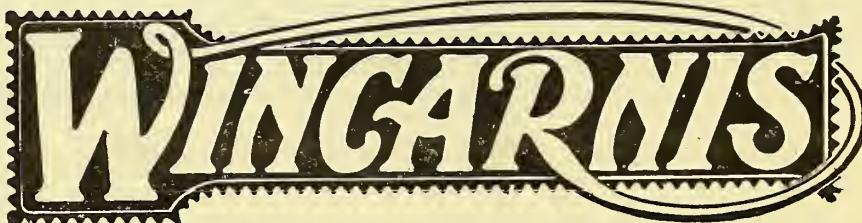
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WITH

DAMAGES AND COSTS,obtained against THE VENDOR
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CHANCERY DIVISION.

Before MR. JUSTICE COZENS-HARDY.

Between ASHTON & PARSONS, LIMITED,

Proprietors of "Phosferine" (*Plaintiffs*)

AND

THE VENDOR OF PHOSFERQUIN (*Defendant*).

A PERPETUAL INJUNCTION with damages and costs was granted on the 14th December, 1900, restraining the above Defendant, his servants and agents from in any manner infringing the Plaintiffs' Registered Trade Mark, 6530, and from selling or offering or exposing or advertising for sale or procuring to be sold any medical preparation not prepared by the Plaintiffs under the name of "Phosferine" or under any other name which by colourable imitation of the Plaintiffs, word "Phosferine" or otherwise was calculated to represent or lead to the belief that such preparation is "Phosferine" or is a preparation of the Plaintiffs, and from selling or supplying any such preparation as aforesaid in response to orders for "Phosferine" or for a preparation of the Plaintiffs or from otherwise passing off or enabling or assisting others to pass off any such preparation as aforesaid as or for "Phosferine" or a preparation of the Plaintiffs.

All information relating to the infringement or dealers in infringements of "Phosferine" will be confidentially treated, and should be addressed to the proprietors of "Phosferine,"

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